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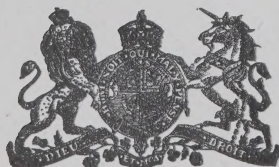
OF THE

DEPARTMENT OF MARINE AND FISHERIES

1907

FISHERIES

PRINTED BY ORDER OF PARLIAMENT




OTTAWA

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1907

[No. 22—1908.]



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*To His Excellency the Right Honourable SIR ALBERT HENRY GEORGE, EARL GREY,
Viscount Howick, Baron Grey of Howick, a Baronet, G.C.M.G., &c., &c., &c.,
Governor General of Canada,*

MAY IT PLEASE YOUR EXCELLENCY :

I have the honour to submit herewith, for the information of Your Excellency and the legislature of Canada, the Fortieth Annual Report of the Department of Marine and Fisheries, Fisheries Branch.

I have the honour to be,

Your Excellency's most obedient servant,

L. P. BRODEUR,

Minister of Marine and Fisheries.

DEPARTMENT OF MARINE AND FISHERIES,

OTTAWA, November, 1907

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REPORT OF THE DEPUTY MINISTER.

To the Honourable L. P. BRODEUR,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit the fortieth annual Fisheries Report of this department for the fiscal year ending on March 31, 1907.

The usual statements of expenditure and revenue, as well as the reports from the various inspectors of fisheries are given, as well as reports on fish-culture, oyster culture, bait cold storage, &c., and a resumé of the work done at the Marine Biological station located in the estuary of the St. Lawrence, opposite Seven Islands; the St. Andrews station on the Passamaquoddy waters of southern New Brunswick at the entrance of the St. Croix river, the Pacific station, Departure bay, near Nanaimo, B.C., and the lake station at Georgian bay, Ontario, is also included.

Appended to this report are two special articles by Professor E. E. Prince, Commissioner of Fisheries for the Dominion, 1st, 'The local movements of fishes,' and 2nd, 'The unutilized fishery products in Canada.'

The appendices referred to above are as follows:—

No. 1. Fishing Bounties.

2. Nova Scotia Fisheries.
3. New Brunswick Fisheries.
4. P. E. Island “
5. Quebec “
6. Ontario “
7. Manitoba “
8. Saskatchewan “
9. Alberta “
10. British Columbia “
11. Fish-breeding Operations.
12. Bait Cold Storage.
13. Fisheries Protective Service.
14. Fisheries Museum.
15. Fisheries Expenditure and Revenue.
16. List of Fishery Officers (outside staff).

BRITISH COLUMBIA FISHERIES' COMMISSION.

The details of the progress made by this commission, consisting of Professor E. E. Prince, chairman; Mr. Campbell Sweeney, Vancouver; Rev. G. W. Taylor, Wellington; Mr. J. P. Babcock, Victoria; Mr. Richard Hall, Victoria, and Mr. J. C. Brown, New Westminster, with Mr. J. Charles McIntosh, Victoria, secretary, were given in the department's (Fisheries) report last year, and the evidence taken at the sittings, the records of the International Mutual Conferences with the State of Washington Special Commissioners, the reports of the various sub-committees, and the memorials, petitions and other representations laid before the commission, formed a basis for the framing of the commission's final report. This report in draft form comprised three parts, first, a general review of the fishery resources, the fishing industries of the province of British Columbia, and comments on the more important aspects of the fisheries of the Pacific coast of Canada; the second part embraced suggested amendments of existing statutes affecting these fisheries and fishing industries, and the third part consisted of a complete and revised code of regulations designed to supplant the existing code, and thus to establish a more concise, appropriate and effective set of fishery regulations.

Each of the Commissioners was provided with a printed copy of the evidence taken at the public sittings of the commission, and a verbatim report of the International Conference in Seattle in November, 1905, as well as reports of certain important executive sittings in Vancouver, and the opportunity was thus afforded of reviewing the evidence offered, and of noting all the more important points raised during the investigations of the commission.

When the executive sittings for the present year were resumed in Victoria on July 10, in the rooms kindly placed at the service of the commissioners by the Board of Trade of Victoria, everything was in readiness for promptly deciding upon the action which the commission might feel justified in taking.

These executive sittings were proceeded with on July 11 and 12, and on the 18th, 19th, 20th, 23rd and 24th. Two members of the commission were absent, but Mr. Babcock returned to Victoria from the official work, which had detained him, and took part in the sittings on the 23rd and 24th, but Mr. Campbell Sweeney, who had spent the summer in Europe, on account of ill-health, had not returned to British Columbia. At these sittings all the points in the draft report, which formed the basis of discussion, were reviewed, and to facilitate such discussion, and to render possible unanimous decisions, by accepting, modifying or rejecting, the suggestions in the draft, as pointed out by Professor Prince, who had supplied each commissioner with a copy. The sittings were held in the morning and afternoon of each day, and at the conclusion of the review and discussions arising out of it, the four commissioners, Messrs. Prince, Hall, Taylor and Brown, signed the report so that it might be forwarded to Ottawa in accordance with the wishes of the Honourable the Minister (Hon. Mr. Brodeur) and the Acting Minister (Hon. Mr. Templeman). The fifth commissioner present when the report was signed (Mr. Babcock) stated that he had not had the opportunity of going over the report as his copy had not reached him in due course, hence he did not append his signature, and Mr. Sweeney was absent in Europe and could not then do so.

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This report, Part I. of the complete report of the commission, after signature, was mailed to Ottawa, and received by the acting minister in the absence of the Honourable the Minister. The commission then adjourned until August 13, as it was reported that Mr. Sweeney would by that date have returned. Part II. of the report, covering such amendments to the statute as appeared necessary, was then taken up, and the consideration of the proposed changes was continued on August 14, and great progress was made. A further adjournment then took place and the Deep Sea Fisheries sub-committee of the commission (Professor Prince and Rev. George W. Taylor) proceeded to the north end of Vancouver island, and dredged and made tests of a technical nature in various localities, especially in Quatsino sound and at Hope island (Bull harbour) and near Cape Scott. On returning to Nanaimo the sub-committee had the pleasure of finding Professor Ramsey Wright, of Toronto, Dr. Field, of the Massachusetts Fish Commission, and Mr. Delano, of Boston, the State Commissioner of Fish and Game for Massachusetts, awaiting them. The party visited interesting localities and fishing stations in Departure bay, and inspected the site of the Marine Biological Station, now being erected in accordance with the strong recommendation of the British Columbia Fisheries Commission. The actual site, it may be added, has been generously granted by Mrs. Dunsmuir, through the kind offices of His Honour Lieutenant Governor Dunsmuir, but a tract of land in addition has been secured for sea-water ponds and experimental purposes.

On August 27, the commission resumed its executive sittings in the Board of Trade Rooms, Victoria. The final draft of Part II. was then completed and the commission decided to forward it to Ottawa, in order that steps might be taken, in ample time for legislation, at the approaching session of the Dominion parliament, if the Honourable the Minister decided to at once carry out the urgent recommendations of the commission *re* revision of certain statutory provisions. It was decided that, as one commissioner, Mr. Campbell Sweeney, was still absent, the suggested new set of British Columbia Fishery Regulations might be held over, and given full consideration at a later date. It was pointed out that whereas Part II. of the report, which had just been completed, was urgent, and might be too late for including in the legislation during the parliamentary session if delayed, that Part III., covering proposed new regulations, could be discussed later, and forwarded subsequently, inasmuch as the authority of an order in council would suffice for giving them the force of law; hence the commission completed Parts I. and II., and left Part III. over for consideration at sittings to be arranged for on dates prior to the close of the year. As a matter of fact, these final sittings of the commission will be held during the early part of November, and the draft code of new Fishery Regulations appropriate to replace the existing set of regulations will be discussed, decisions reached, and a concluding report signed and forwarded to the Honourable the Minister.

It is highly satisfactory to note that the principal points in Part I. of the report, signed and forwarded to Ottawa, were printed *in extenso* in the various daily newspapers on the Pacific coast and highly laudatory notices appeared in some of the most important journals. 'The government which sent this commission to British Columbia,' said one newspaper, 'deserves well of the country,' and surprise was expressed at the

7-8 EDWARD VII., A. 1908

amount of new information *re* the fishery resources of the Pacific waters of Canada; it was declared, indeed, that the report 'would be a revelation to most people in the province.' As Professor Prince, chairman of the commission, said when opening the public sessions for taking evidence in Victoria, B.C.: 'There have been previous fishery commissions appointed by the Dominion government, but no previous commission has had quite so large a field defined for its investigation as this, because, not only is the salmon industry in all its various phases included in the work of the commission, but the international bearings of that industry are included too. And in addition to that, the developing of the deep sea and coastal fisheries are included, so that it is apparent that the work of the commission is of great magnitude, and very great importance. It is clear, therefore, that all available information is desirable in order to guide the commission to wise and useful conclusions so that it may make recommendations of value to all concerned.

'The order in council authorizing this commission dated July 22, 1905, points out that the necessity for a commission to make an investigation into the present state of the Canadian fishing industry on the Pacific coast has appeared urgent. That representations have been made in favour of a commission of inquiry, especially in view of the crisis which has been reached on account of the one-sided arrangement which has existed for some years between Canada and the United States in the contiguous waters of Puget sound and the Straits of Georgia. A one-sided arrangement, because while Canada has been carrying out a somewhat elaborate system of protection, there was for some years very little done in the adjacent state of Washington on these lines, and a feeling of dissatisfaction has arisen owing to this unfair and one-sided system of fishery regulation. The commission is authorized to make full inquiries into all matters affecting the fisheries, and to obtain information from all possible sources in order to submit a scheme of regulations which will best preserve, protect and develop the fishing industries of British Columbia.'

GEORGIAN BAY FISHERY COMMISSION.

The commissioners appointed to investigate the fisheries of Georgian bay and certain other western Ontario waters, viz.: Mr. John Birnie, K.C., of Collingwood; Mr. James J. Noble, of Little Current; and Professor Prince, Dominion Commissioner and General Inspector of Fisheries for Canada, have continued their important and extensive labours during the past season, and have now only the eastern waters of Lake Erie to visit, and some evidence to take at Blind River and Sault Ste. Marie before drawing up their final report.

As stated in the department's report (Fisheries) for 1906, the commission had almost completed the work, with which they were originally charged by the order in council, approved by His Excellency the Governor General on August 6, 1905, but owing to additional onerous duties added by authority of orders in council dated, respectively, April 18, 1906, and August 14, 1906, a further special series of sittings became necessary in order to secure additional information from the fishermen, fishing firms, and parties concerned in the Squaw island question. The Squaw island

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fisheries investigation was promptly completed, and a report and recommendations to the Honourable the Minister were drawn up, and the documents only await signature by the members of the commission before submission to the Honourable the Minister. Later a somewhat extensive addition to the commissioners' programme of inquiry was made by the inclusion in its investigations of the waters of St. Clair river, St. Clair lake, Thames river, Detroit river, and Lake Erie from Amherstburg to Niagara. These waters had been previously visited by two important commissions, viz.: the Dominion Commission of 1892, consisting of Mr. Edward Harris and the late Mr. S. Wilmot; and in 1896 by the International Fishery Commission, on which sat as commissioners Dr. William Wakeham, representing Canada by authority of a Royal Commission from the Sovereign, and Dr. Richard Rathbun, of Washington, D.C., by authority of the President and the government of the United States.

The present Dominion Commission, after an executive sitting in Ottawa in March, arranged for a series of sessions commencing on July 20. The series continued until the middle of October, and it is probable that in December executive sittings will be held to summarize and review the evidence with a view to completing a report on the Georgian bay fisheries as a whole. The Lake Erie report will be completed as soon as possible thereafter.

It is hardly necessary to point out that since the two commissions of 1892 and 1896, the conditions surrounding the western Ontario fisheries have materially changed. Not only has their immediate superintendence passed from the hands of the Dominion Government to the hands of the Provincial Government in Toronto, but the fisheries themselves have altered in a variety of ways. The evidence taken at the long series of sittings held during the past summer and fall, and the personal visits of the commissioners to the nets while fishing operations were proceeding, as well as the visits to the freezers, fish houses, &c., at the various fishing centres, has resulted in the accumulation of a large amount of new material, and of information which cannot fail to be of immense advantage to the Honourable the Minister and to the Fisheries Department at Ottawa. With this inclusive and detailed information on the most recent phases of the great lakes fisheries the Honourable the Minister will be inevitably aided in reaching just and proper conclusions in the complex questions which the commissioners have investigated. The reports of the commission are fourfold, viz.: the Georgian bay fisheries with reference chiefly to local needs and fish and game clubs, a report upon which was laid before the Honourable the Minister last year, unanimously signed by the commission; second, the Squaw island question upon which a report is completed, and about ready for presentation; third, a report on the commercial fisheries of Georgian bay and the north channel to be completed, if possible, early in December; fourth, a report upon the fishery questions now under discussion in Lake Erie.

The vast extent of the commission's work, as amplified by the two orders in council referred to, is indicated by the area covered by the sittings which were arranged as follows:—

Windsor, July 23 and 24.

Stony Point, July 29.

Chatham, July 31 and August 1.

Wallaceburg, August 3.
Port Lambton, August 6.
Sarnia, August 8 and 9.
Point Edward, August 10.
Sandwich, August 14.
Amherstburg, August 16.
Kingsville, August 19.
Leamington, August 21.
Point Pelee, August 23.
Pelee Island, August 24.
Wheatley, August 28.
Romney, August 29.
Port Alma, August 31.
Dealtown, September 2.
Rondeau, September 21.
Ridgetown, September 24.
Port Talbot, September 25.
Port Stanley, September 27.
Dutton, September 30.
Port Bruce, October 1.
Port Burwell, October 3.
Clear Creek, October 4.
Port Royal, October 4.
Port Rowan, October 5-8.
Long Point, October 7.

It may be pointed out that, at Port Lambton, the commissioners visited the seining grounds and had the opportunity of seeing the nets being hauled, while near Sarnia the pound-nets on the Canadian and the United States' shores were examined while operating. From Amherstburg the seines near Bar point were inspected and the catches of fish noted, while at Leamington the nets along the shore of the lake were visited. During the commission's visit to Rondeau the pound-nets on the outside a lake shore were visited while the process of lifting was being carried out. At Port Bruce, on October 1, the fish houses were inspected and the gill-nets examined, while at Port Burwell the fish houses were visited when the seine catches were brought in, and some of the seining grounds on the south shore of Inner bay, Long point, were visited, but the weather was too rough to allow the seines to be hauled. The sittings arranged for October 19 at Blind River, and on October 21 at Sault Ste. Marie, had to be postponed as being most inconvenient to the local fishermen who wished to give evidence. They were postponed to a later date, and the commissioners proceeded to Little Current and Killarney, Ont., to carry out some pound-net tests. A mesh larger than many of the fishermen favour, was inserted at the back of the nets and when the 'pot' was lifted, the nets were visited so that the commissioners could have ocular demonstration of the proportion of small undersized fish that escaped from the pound-net. Three tests were arranged and the commissioners on October 26 and October 28 went out in sail-boats or in tugs to the nets and saw the catches secured. The results

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will be carefully considered when the commissioners meet in executive session early in December to compile their Georgian Bay Commercial Fisheries report.

The work of the commission, it may be added, has excited the liveliest interest in the fishing centres visited, and the press in the localities both on the Canadian and United States sides have given prominent notice to the sittings, reported at length the evidence, and published leading articles on the work accomplished. The following extract from the *Toronto Globe*, July 20, 1907, may be quoted:—

‘The commissioners consisting of Professor Edward E. Prince, Dominion Commissioner of Fisheries at Ottawa, James J. Noble, of Little Current, and John Birnie, K.C., of Collingwood, have made a most exhaustive investigation into the condition of the fisheries of the Georgian bay and adjacent waters. They visited every fishing station on the bay and personally observed the class of fish which was killed, the style of net which was used, weighing more particularly the advantages of the pound-net and gill-net, and marked other working out of the close season in the different localities. They took the evidence of nearly every fisherman on the Georgian bay and thus will be able to present the Minister a mass of valuable testimony from those who are more particularly interested in the fisheries and can speak with authority on the complex questions involved in the investigation.’

Certain Dominion and United States hatcheries will be visited during the present winter, while in full operation, and after the eight or ten sittings still to be held, have been completed the commission will render its final report and the work will come to a conclusion.

THE BIOLOGICAL STATIONS OF CANADA.

In a country so extensive geographically as the Dominion of Canada it was not to be expected that the two biological stations, the Marine Biological Station, on the Atlantic coast, and the Georgian Bay Biological Station, situated about midway along the great lakes, would be found sufficient to overtake the vast field of fishery and biological work demanding investigation. The work has grown, and with a more adequate appropriation the organization of the researches has also grown. Indeed, during the season now closing, fisheries investigations were on a four-fold scale, viz.: on the north shore of the St. Lawrence, at Seven Islands, on the southern Atlantic shores, Nova Scotia and New Brunswick, on the Pacific coast, around the northern portion of Vancouver Island, and on the east shore especially near Departure bay, Nanaimo.

ATLANTIC BIOLOGICAL STATION.

The Marine Biological Station, which for two seasons had been situated at Gaspé, was towed round in its floating scow to the St. Lawrence in June. Dr. Wakeham, who had brought it in 1905 from Prince Edward Island, arranged to tow it by means of the Canadian government cruiser *Princess*, to its new position. Unfortunately, for some reason, it began to leak, and the scow filled so rapidly that there was no option but to select a suitable spot on the south shore, and beach the station at Grand Valley. This was done, and repairs were afterwards authorized under the department's agent, Mr. J. U. Gregory, I.S.O., of Quebec. Dr. Joseph Stafford accompanied Commander

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Wakeham, and after due consideration it was arranged that, in the meantime, the building and scow should remain at Grand Valley, while Dr. Stafford and the staff should make Seven Islands the centre of their fishery investigations. Messrs. Bayne and Scrimgeour, of the University of Toronto; Mr. Smith, of the University of Cambridge, England, resident in Ottawa, and Dr. Stafford, of McGill University, Montreal, curator of the station, carried on the season's work. Mr. Bayne took up the investigation of marine anthropoda, of which the food of so many valuable food fishes consists; Mr. Scrimgeour devoted his attention to the hydroid zoophytes; Mr. Smith gave general assistance in dredging, &c., while Dr. Stafford continued his somewhat varied and inclusive studies on the fishes and marine life generally of that portion of the north shore accessible from Seven Islands.

The staff were much hampered owing to the breakdown of the gasoline launch and the whaling station a few miles away could not be visited, though it was anticipated that valuable material for study and new information as to the habits of whales, &c., could have been secured. Dr. Stafford reports that, in his opinion, Seven Islands appears to be so representative of the north shore generally that it would not be very advantageous to carry on work there, unless a place near Belle Isle, really the Labrador coast could be selected, or even St. John's, Newfoundland, where a large amount of valuable fishery work could be done at a centre so important and famous as a great fisheries metropolis. A vessel suitable for visiting the 'Banks' and making deep-sea investigations would enable the staff to do most valuable work, were a location decided upon at some point nearer the Atlantic waters, as suggested by Dr. Stafford.

About the end of September the season's work ended, as the staff had returned to their academic duties, and Dr. Stafford then returned to Montreal.

MARINE BIOLOGICAL STATION, N.B.

The Biological Board had placed before them a very able detailed report upon various Atlantic sites for a permanent station, and in view of the limitations and disadvantages of most of the locations examined and reported upon by the special committee (Professors Penhallow, MacAllum, McBride and Bailey) and certain areas examined by Dr. Stafford at the request of the committee, it was determined to try to secure a site at St. Andrews, New Brunswick. Professor Penhallow, hon. secretary of the Biological Board, was most active and assiduous in carrying out the scheme approved by the board. Many of the best sites, it was found, were possessed by the Canadian Pacific Railway Company, and the president, Sir Thomas Shaughnessy, most generously came to the aid of the board, and he consented to the acquisition of a location for the new station at Joe's Point, not far from the mouth of the St. Croix river. The site is an ideal one, and will afford most convenient access to the sea, a small landing stage and shed alone being necessary, while the buildings, laboratories, library, common room and boarding quarters; as well as the proposed aquarium, store-rooms, &c., are accessible by a specially made drive from the high road near the famous gold links. Much work has been done on the site under the supervision of Professor Penhallow, and the building is now in an advanced state and nearing completion, while a landing stage, suitable boats, water storage tank and other necessary adjuncts are in progress, and will be

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available for next season. Apart from a suitable gasoline launch, the station will require a larger steam vessel for researches on the fishing banks and for dredging in deep water. In the meantime, the board have authorized the necessary preparations to allow of active fisheries investigations next summer, and when completed this Passamaquoddy station will not be rivalled on this continent for convenience and for the great opportunities it will afford for valuable fishery and scientific biological researches.

PACIFIC BIOLOGICAL STATION.

For many years an eminent scientific authority, the Rev. George W. Taylor, F.R.S.C., resident at Wellington, near Nanaimo, B.C., has urged the desirability of a marine biological station for British Columbia. The British Columbia Fisheries Commission in their interim report in 1906 warmly urged the proposal, which has been supported from various influential quarters. Provision was made in the appropriation for biological stations, and this year the station is practically an accomplished fact.

The lively interest of His Honour the Lieutenant Governor of British Columbia (Mr. James Dunsmuir) and the very generous action of Mrs. Dunsmuir, in granting an admirable site on a pretty slope overlooking Departure bay, near Nanaimo, rendered it necessary for the sub-committee authorized to act, merely to secure a small additional tract of land affording ample landing facilities, sites for hatching and rearing ponds, and other projects, and then proceed with the clearing of the site, and the commencement of a small biological building.

Under the enthusiastic and capable supervision of Mr. Taylor, the work has been vigorously urged forward, and Canada will soon possess one of the most admirable marine laboratories in the world, situated close to one of the most richly prolific fishery and marine areas known to zoologists.

The United States Government expeditions made some of the most amazing captures in the waters overlooked by the new British Columbia marine station. Herring, salmon, crab, oyster and other fisheries are carried on in these Nanaimo waters, and a new whaling station has been built on a lagoon a couple of miles distant.

Dredging, tow netting and other methods of collecting specimens were followed by Professor Ramsay Wright, Rev. George W. Taylor and Professor Prince last summer, and the reputation of the locality for a rich and varied fauna was fully sustained.

The British Columbia public have followed with keen interest the development of this important institution under the auspices of the Dominion Government.

GEORGIAN BAY BIOLOGICAL STATION.

During the past summer the study of fish-life and of aquatic biology in the waters adjacent to this station have been continued under the direction of E. M. Walker, Esq., B.A., Toronto University, whose enthusiasm and ability as a trained biologist resulted in great progress being made in spite of the enforced absence for a consider-

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able time of Dr. B. Arthur Bensley, the head of the station. Dr. Bensley found himself able to carry on some work after the season's operations were advanced, and the staff of workers again included Mr. A. G. Huntsman and others from the University of Toronto.

Various problems which had been submitted to the staff by the Dominion Commissioner of Fisheries (Professor Prince) were studied and the reports, which are not yet completed, will be of scientific interest and of much practical value when published.

Tests with various meshes of nets to prove the relative effectiveness or the wastefulness of fishing nets will be again made next season in order that conclusive results may be reached.

SCOTCH HERRING CURING EXPERIMENT.

A comprehensive resumé of the operations carried on in this important innovation of the Canadian herring industry during the past three years will be found at page xvi. of the Thirty-ninth Annual Report of the Department of Marine and Fisheries,—Fisheries—for 1906.

During the present year the experiment was continued under the same management, that of Mr. John J. Cowie, of Lossiemouth, Scotland, a herring curer of long experience, and thoroughly versed in all branches of the industry. The staff again consisted of six girls and a cooper, who were brought out from Scotland, and on board the steam drifter *Thirty-three*, which was again used for supplying the herring to the staff, were eight drift-net fishermen, all of whom, with the exception of the captain, were Canadians.

It was intended this year to have commenced the operations at the Magdalen Islands, but owing to the unusually late spring the gulf was so full of ice when the drifter and staff reached Souris, P.E.I., that it was impossible to proceed to the Magdalen islands, and work was consequently begun at Souris, where operations were continued until the end of June.

The drifter first went to sea for herring on May 15, and from then to June 6, 340 barrels of fresh herring were landed. Of these, 203 barrels were cured, the bulk of which was sent to the New York market. Of those not cured, 57 barrels were sold to vessels at sea, as the drifter was unable to reach port on account of the ice, and the balance being too small for curing was placed in the local freezer to be used for bait.

From Souris the staff went to the Magdalen islands, where the first catch was landed on July 6, and from then until the 20th of that month the catch was more or less steady, ranging from 5 to 58 barrels per night, and totalling 264 barrels.

The fishing grounds resorted to were anywhere from eight to twenty miles off shore, and seemed to abound in herring.

In quality the herring were large and fat, and of the class known as 'Matjes.' Previous to the advent of these operations no herring had been landed at the Magdalen

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islands in July, and the bringing in of so many large, fat herring at that time was a revelation to the local fishermen, and demonstrated beyond peradventure that herring of the first quality abound in the waters a considerable distance off shore, where they had not hitherto been sought, which might be readily taken by the use of drift-nets.

Only 27 barrels of the 264 landed here were unsuitable for curing, and the finished product, being all of the 'Matje' class were shipped to the following markets:—

	Brls.	Half brls.
H. Berneaud, Stettin, Germany	79	Large Matjes.
H. J. Pallisen, St. Petersburg, Russia. . . 10	20	" "
H. J. Pallisen, St. Petersburg, Russia . . .	20	Selected "
Woodward & Son, New York	50	Large "
Woodward & Son, New York	15	Selected "
Woodward & Son, New York	22	Medium "

Grand River, Gaspé county, was the next base of operations, and the first catch landed by the drifter there was on August 16, and from that date on to September 12 catches varying from two to forty barrels of herring was landed, making a total of 231 barrels.

The fishing ground mainly resorted to was out in the middle of Chaleur bay, between Grand River and Miscou island, and the quality of the herring was fairly good all through, fewer 'spent' fish being mixed therewith, than were found in the bay last year; but forty-four barrels out of the 231 caught were made up of such fish, which are useless for curing. The finished product was as follows:—

102 half-barrels 'large fulls.'
 61 half-barrels 'fulls.'
 42 half-barrels 'medium fulls.'

Some of these were shipped to the New York and Boston markets. A small lot also sent to Montreal, while the remainder is being held at Halifax until reports from the different shipments are received.

On completing operations at Grand River the drifter went to Halifax with the cured herring, and was there laid up for the winter, the crew being paid off. The services of three of the girls were also discontinued, and Mr. Cowie, with the remainder of the staff, proceeded to Grand Manan, New Brunswick, where they arrived on October 23, the object being to procure herring from the local fishermen at the different places, with which to demonstrate to them the Scottish methods of curing, and though Mr. Cowie found that herring are scarce around the island this fall, and that those being caught were 'spent' fish, he procured sufficient at three different places, viz.: North Head, Grand Harbour and Seal Cove, to enable him to instruct the fishermen in the process.

Mr. Berneaud, of Stettin, Germany, in reporting on the consignments sent to him, states that the barrels arrived none the worse for their long transport, 'and on being opened showed the contents to be carefully cured, well selected and nicely finished, in no respect second to anything we are receiving from Scotland,' and only drawback

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being that they were larger than the trade there is accustomed to. Statements of sales have not yet been received; but the consignees quote thirty-five marks per barrel, which allowing for the German duty of three marks, would net back about \$7 per barrel.

The St. Petersburg consignee also refers to the large size of the fish, and though his statement of sales has not yet come to hand, he quotes twenty-five rubles or \$13 per barrel, which would net back \$6 per barrel, the duty on herring entering Russia being very heavy, viz., \$3.50 per barrel.

Information just received from the Boston shipment shows that the 'Large Fulls' sold at \$10 per barrel, the 'Fulls' at \$9 and the 'Medium Fulls' at \$8, and the Montreal consignment also sold at the rate of \$10 per barrel.

In view of the fact that the quotation contained in the New York *Fishing Gazette* of November 9, 1907, which quotation would apply to the time when the above sales were effected, the price for 'Extra Fancy Selected Large Fulls Shetland Fish is \$11 to \$11.50 per barrel,' the prices received for the Canadian product must be accepted as most gratifying, and offering the strongest inducements for the fishermen to adopt the improved methods of curing in order that they may avail themselves of such remunerative prices for their herring.

Up to the moment no returns of sales have been received from the New York consignments, and that market has so far proved disappointing; but the fact that the shipments to Russia and Germany where they would meet with the best products of the different portions of Europe, have not only been favourably reported upon; but so far as the German shipment is concerned, which is stated by Mr. Cowie to be of a better grade than that sent to St. Petersburg, it has been declared to be equal to the best received there, would seem to be sufficient to set at rest all doubts as to the adequacy of the Canadian fish, properly cured, to command the best markets.

Indications that the object of the department in conducting this experiment is being achieved, are not wanting. At different points fishermen and those interested in the industry are making preparations to so equip themselves as to be able to embark in the project, which can no longer be looked upon as a venture.

It has been demonstrated that by the use of drift-nets, herring of the best quality can be caught off shore at long distances when they are no longer available on the inshore, where alone previously they were caught, and it is anticipated that the time is not far distant when Canada will be doing a large and lucrative business in supplying to the markets of the world herring of a quality equal to the best.

THE SOURIS FISH-DRIER.

As explained in the Annual Report of the Department of Marine and Fisheries—Fisheries—for the year 1906, the object of establishing this institution was to bring prominently before the fishermen engaged in line fishing for cod, haddock, hake, &c., the expediency and practicability of adopting improved methods for the drying of their catches, in order to enable them to place on the markets of the world an article equal

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to the best of its kind, and so avail themselves of the highest prices obtaining for such products.

The facilities, that such method of drying fish affords the fishermen, could not have been more clearly demonstrated or strongly impressed than during the past summer, owing to the most exceptional weather conditions that obtained on Prince Edward Island. Rainy and damp days followed each other in such close succession that it was not only next to impossible for the fishermen during much of the season, even if they so desired, to dry their fish on the flakes, but the manager of the drier was forced on occasions to put the fish through the plant without being at all exposed to the air on the flakes, rendering successful results much more difficult and expensive of attainment.

The output of the drier, however, continued to be quite satisfactory and has been very favourably received and reported upon from different markets of the world, and during the past season its operations were limited only by its capacity, as more fish were offering than could be handled.

The quantities of the different kinds of fish received at the drier up to the end of October were as follows:—

	Pounds.
Green codfish..	48,000
Kenched codfish..	274,000
Green hake..	229,000
Kenched hake..	224,000
Flaked hake..	3,400

As in the past the cured articles were shipped to Barbados, Jamaica, Liverpool and the more local markets.

GENERAL STATISTICS *RE* FISHERIES.

EXTENT OF CANADIAN COAST.

The fisheries of Canada are the most extensive of the world, extending over an immense sea-coast line besides our innumerable lakes and streams.

The eastern sea-coast of the maritime provinces from the Bay of Fundy to the Straits of Belle Isle covers a distance of 5,600 miles, which is more than double that of Great Britain and Ireland. While the salt water inshore area, not comprising minor indentations, covers more than fifteen hundred square miles, not including the numerous lakes in Manitoba and other western districts, all stocked with excellent species of food fish.

FISHERIES EXPENDITURE AND REVENUE.

The statement of the total expenditure for the different services connected with the fisheries of Canada during the last fiscal period ending March 31 last, forms Appendix 15 of this report, page 350.

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The total fisheries expenditure amounts to \$693,685, subdivided as follows: Fisheries proper, \$95,930; fish-culture, \$118,681; fisheries protection service, \$204,837; miscellaneous expenditure, \$115,220, including also \$159,015 distributed as fishing bounties.

The total amount received as revenue from fishing licenses, fines, &c., during the same period in the different provinces of Canada, is given as \$59,544. This sum also includes \$4,134 received from the United States fishing fleet as *modus vivendi* fees.

See statement for whole year, p. 300.

A comparative statement of all expenditure and revenue for the last fifteen years concludes this appendix.

For fuller details of the different fishery expenditures, see Auditor General's Report, under their different headings.

BOUNTIES FOR FISHING.

The deep-sea fishermen of the maritime provinces received the sum of \$159,015 as bounties on their respective catches of fish for the season of 1906.

Of this amount, the owners of 957 fishing vessels and their crews received \$68,208. The balance, \$90,807, was distributed amongst 20,871 boat fishermen.

For the past season, the province of Nova Scotia received nearly double the amount of bounty paid to the other three provinces, viz.: \$99,518; Quebec, \$34,410; New Brunswick, \$16,247; and Prince Edward Island, \$8,839.

Since its inception (1882) the sum of \$3,949,701 has been distributed amongst the fishermen of the above named provinces to enable them to better develop their industry.

The regulations governing the payment of such fishing bounties, as well as all particulars respecting their distribution, form the first appendix of this report.

VALUE OF THE FISHERIES OF CANADA.

The whole catch of fish in our waters by Canadians, including fish products, seals, &c., during the season of 1906, is valued at over twenty-six million and a quarter dollars.

With the exception of last year when the phenomenal catch of salmon in British Columbia swelled the total value of fisheries beyond twenty-nine million dollars, this is the largest aggregate on record, exceeding the famous catch of 1901 by half a million dollars.

A glance at the following statements will easily show that this decrease is mostly attributed to the British Columbia salmon industry.

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The following table shows the total value of the fisheries of each province in their respective order of rank, with the increase or decrease as compared with 1905:—

Provinces.	Value of Fish.	Increase.	Decrease.
	\$	\$	\$
Nova Scotia	7,799,160		459,925
British Columbia.....	7,003,347		2,846,869
New Brunswick.....	4,905,225	58,135	
Quebec.....	2,175,035	171,319	
Ontario.....	1,734,856	25,893	
Prince Edward Island.....	1,168,939	170,017	
Manitoba.....	1,492,923		318,647
Saskatchewan.....			
Alberta.....			
Totals.....	26,279,485	425,364	3,625,441
Net decrease.....		3,200,077	

The most important fluctuation is the large decrease noticed last year in British Columbia, attributed chiefly to the shortage in the salmon industry of the west. It is true that the product of 1905 was the highest on record and it is not expected that such another production will be reached before the next fourth year.

The decline in the inland western districts may be safely ascribed to the limitation of seasonable fishing in those western waters which are as difficult of access as inconvenient to the shipment of the catch.

Three of the maritime provinces show signs of improvement over the previous production, especially in the Gulf of St. Lawrence.

The various features in the fisheries of each province are fully treated by the different fishery inspectors in their respective reports forming the appendices two to ten of this publication, as well as in their preliminary reports herewith.

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The following statement shows the relative values of the principal kinds of the commercial fishes above \$100,000 for the year 1906, as compared with those of the previous year:—

Kinds of Fish.	Value.	Increase.	Decrease.
	\$	\$	\$
Salmon	5,856,760		3,133,182
Cod	3,471,186	49,786	
Lobsters	3,422,927		484,071
Herring	2,704,596	401,111	
Mackerel	1,369,728	411,505	
Whitefish	906,759		144,402
Trout	791,467	55,699	
Haddock	766,896		39,847
Pickarel	713,437		71,551
Halibut	683,840	67,105	
Sardines	514,916		363,456
Pollock	430,980	107,948	
Smelts	425,631		7,516
Clams, quahaugs, &c.	398,634	128,783	
Hake	384,491		63,174
Pike	204,616		22,448
Oysters	194,855	20,555	
Sturgeon	140,735		58,043
Alewives	139,689	18,049	
Eels	128,217		509

The quantity of fish used as bait in the season of 1906 is valued at \$544,453, and that of fish oil at \$253,520.

The fur seal skins secured by the British Columbia hunters during the same period realized \$316,224.

Out of the twenty different species of fish given above, the number of increases and decreases are about equal.

The most important fluctuation is noticed in the salmon industry, which notwithstanding a diminution of over three million dollars, still heads the list with a surplus of over two millions above any other species.

While the lobster industry is half a million less than last year, that of herring and mackerel each show an increase of over \$400,000.

The large falling off noticed in the sardine industry is ascribed to the reduction of fifty cents per barrel as received fresh from the weir fishermen.

It will be noticed how the clam industry, mostly quahaugs, is assuming large proportions, showing more than \$200,000 in excess of the oyster industry, which only holds its own by the rise of its value during recent seasons.

None of the other fluctuations are of much importance.

Of the principal fresh water species, whitefish has a considerable diminution, mostly felt in Manitoba and Saskatchewan, but trout shows a slight improvement over

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last year. Pickerel and pike also both show less than in 1905 in the same western districts.

From the year 1869 to 1906 inclusive, the five principal commercial sea fishes have yielded the following values to the industry:—

Cod.	\$139,514,753
Salmon.	96,790,219
Lobsters	83,291,553
Herring	75,270,165
Mackerel.	47,416,972

EXPORT OF FISH.

During the last year ending June 30, the fish and fish products, including marine animals, exported from Canada to foreign countries, chiefly to the United States and Great Britain, amounted to \$12,585,808.

RECAPITULATION.

OF the Yield and Value of the Fisheries of the Dominion of Canada for the Year 1906.

Number.	Kinds of Fish.	Quantity.	Value.	Total.
			\$	\$
1	Cod, dried.....	Cwt. 670,775	3,353,875	
2	" fresh or green.....	Lb. 2,170,695	101,381	
3	" tongues and sounds.....	Brls. 1,593	15,930	
4	Haddock, dried.....	Cwt. 82,745	288,289	3,471,186
5	" fresh.....	Lb. 10,540,160	316,205	
6	" smoked (finnan haddies).....	" 2,706,706	162,402	
7	Hake, dried.....	Cwt. 126,727	361,725	766,896
8	" sounds.....	Lb. 91,100	22,765	
9	Pollock.....	Cwt. 143,662		384,490
10	Tom cod or frost fish.....	Lb. 2,192,350		430,980
11	Halibut.....	" 15,665,410		65,770
12	Flounders.....	" 1,394,210		683,840
13	Salmon, preserved in cans.....	" 30,223,384	3,778,606	41,826
14	" fresh.....	" 9,116,560	1,229,162	
15	" smoked.....	" 459,270	49,259	
16	" pickled or dry salted.....	" 15,020,452	799,733	
17	Trout (all kinds).....	" 8,027,177		5,856,760
18	Ouananiche.....	" 9,450		791,467
19	Whitefish.....	" 12,293,710		945
20	Smelts.....	" 8,459,006		906,759
21	Oulachons.....	" 910,560		425,631
22	Herring, salted.....	Brls. 331,996	1,534,336	45,878
23	" fresh.....	Lb. 24,334,432	771,474	
24	" smoked.....	" 17,968,565	374,403	
25	" kippered.....	" 315,650	24,383	
26	Sardines, preserved in.....	Cans. 3,270,000	163,500	2,704,596
27	" fresh or salted.....	Brls. 230,901	351,416	
28	Shad.....	" 992,600		514,916
29	Alewives.....	" 31,558		59,021
30	Pike.....	Lb. 5,625,500		139,689
31	Maskinongé.....	" 5,110		204,616
32	Eels, pickled.....	Brls. 7,994	79,940	510
33	" fresh or smoked.....	Lb. 804,610	48,277	
34	Perch.....	" 992,600		*128,217
35	Pickarel.....	" 9,924,770		33,201
36	Bass (achigan).....	" 32,800		713,437
37	" sea or striped.....	" 184,725		3,280
38	Mackerel, salted.....	Brls. 52,075	781,125	18,468
39	" fresh.....	Lb. 4,905,025	588,603	
40	Sturgeon.....	" 995,915	87,471	1,369,728
41	" caviare or bladders.....	" 60,020	53,264	
42	Lobsters, preserved in cans.....	Lb. 10,104,764	2,522,179	140,735
43	" fresh or alive.....	Cwt. 101,370	960,748	
44	Oysters.....	Brls. 32,355		3,422,927
45	Clams, quahaugs, scallops.....	" 18,460		194,855
46	Squid.....	" 18,460		398,634
47	Coarse and mixed fish.....	" 14,451,780	454,484	73,840
48	" ".....	Lb. 14,451,780	424,621	
				879,105

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RECAPITULATION.

Of the Yield and Value of the Fisheries of the Dominion, &c.—*Concluded.*

Number.	Kinds of Fish.	Quantity.	Value.	Total.
			\$	\$
49	Fur seal skins in 'B.C. No.	10,368		316,224
50	Hair seals skins "	39,262		45,228
51	Beluga skins "	193		772
52	Fish used as bait Brls.	362,969		544,453
53	" " fertilizer "	474,179		240,265
54	Fish oil Galls.	824,191		253,520
55	Dulse			6,720
	Total			26,279,485

RECAPITU

SHOWING the whole production of the Fisheries in the

Number.	Kinds of Fish.	NOVA SCOTIA.		BRITISH COLUMBIA.		NEW
		Quantity.	Value.	Quantity.	Value.	
			\$		\$	
1	Cod, dried Cwt.	386,840	1,934,200			84,458
2	" fresh or green Lb.	266,400	7,992	711,000	39,260	553,595
3	" tongues and sounds Brls.	930	9,300			350
4	Haddock, dried Cwt.	64,691	226,418			14,818
5	" fresh Lb.	10,274,125	308,224			199,925
6	" smoked (finnan haddies) "	2,570,550	154,233			136,156
7	Hake, dried Cwt.	91,938	269,731			23,940
8	" sounds Lb.	45,995	11,499			26,450
9	Pollock Cwt.	114,520	343,559			29,132
10	Tom cod or frost fish Lb.	157,950	4,738			1,933,400
11	Halibut "	924,848	92,485	14,416,700	570,835	146,200
12	Flounders "	694,210	20,826			685,000
13	Salmon, preserved in cans "	6,804	1,021	30,214,080	3,776,760	5,550
14	" fresh "	714,210	134,381	5,156,486	483,934	2,182,340
15	" smoked "	24,970	4,994	425,900	42,590	8,300
16	" pickled and dry salted "			14,939,252	793,643	
17	Trout (all kinds) "	167,675	16,767	484,900	48,490	200,600
18	Ouananiche "					6,450
19	Whitefish "					6,716,990
20	Smelts "	415,510	20,776	412,500	20,625	
21	Oulachons "			910,560	45,878	
22	Herring, salted Brls.	114,417	540,850			183,084
23	" fresh Lb.	5,437,232	54,372	8,934,000	146,250	3,269,000
24	" smoked "	779,930	15,599	187,900	18,790	16,765,665
25	" kippered "					315,650
26	Sardines, preserved in cans Cans					3,270,000
27	" fresh or salted Brls.					227,525
28	Shad "	710	7,100		500	
29	Alewives "	8,124	32,496			22,844
30	Pike Lb.					
31	Maskinonge "					
32	Eels, salted Brls.	3,320	33,200			3,565
33	" fresh Lb.					
34	Perch "					
35	Pickarel "					106,500
36	Bass (achigan) "					
37	" sea or stiped "	12,650	1,265			163,400
38	Mackerel, salted Brls.	40,829	612,435			215
39	" fresh Lb.	4,468,525	536,223			360,500
40	Sturgeon "			25,000	2,500	10,800
41	" caviare and bladders "					1,000
42	Lobsters, preserved in cans "	4,595,816	1,148,954			2,420,860
43	" fresh or alive Cwt.	87,956	784,853			12,889
44	Oysters Brls.	1,722	10,332	725	5,075	14,920
45	Clams, quahaugs, scallops "		41,988		9,820	
46	Squid "	17,218	68,872			1,094
47	Coarse and mixed fish "	61,329	122,658		4304,736	12,990
48	" Lb.		580	466,400	26,875	
49	Fur seal skins in B.C. No.			10,368	316,224	
50	Hair seal skins "	156	195	5,600	3,150	72
51	Fish used as bait Brls.	73,132	109,698			126,841
52	" used as fertilizer "	106,739	53,370		3,570	210,615
53	Fish oil Galls.	209,921	62,976	125,265	43,842	*56,862
Totals			7,799,160		7,003,347	

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LATION.

different Provinces of Canada for the year 1906.

BRUNSWICK.	QUEBEC.		ONTARIO.		P. E. ISLAND.		MANITOBA, SASKATCHEWAN, ALBERTA, ETC.		Number.
Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
\$		\$		\$		\$		\$	
422,290	178,485	892,425			20,992	104,960			1
22,144	639,700	31,985							2
3,500	195	1,950			119	1,180			3
51,863	2,635	7,905			601	2,103			4
5,998	39,610	1,188			26,500	795			5
8,169									6
59,850	537	1,208			10,312	30,936			7
6,612					18,655	4,664			8
87,396					10	25			9
58,002	101,000	3,030							10
14,620	176,862	5,820			800	80			11
20,550					15,000	450			12
825									13
402,788	1,051,430	205,639			12,100	2,420			14
1,660					100	15			15
	81,200	6,090							16
20,140	219,592	21,959	6,951,260	669,376	22,150	2,215	201,000	12,520	17
	9,450	945							18
968	59,510	5,951	2,927,650	290,155			9,300,100	609,635	19
338,530	210,696	10,535			703,310	35,165			20
									21
816,851	20,108	98,120	1,316	13,160	13,071	65,355			22
32,690	2,138,100	21,381	4,280,500	214,025	275,600	2,756			23
335,313	235,070	4,701							24
24,383									25
163,500									26
341,288	3,376	10,128							27
49,477		1,944							28
104,833					590	2,360			29
	111,200	5,560	1,950,200	78,008			3,564,100	121,048	30
	5,100	510							31
35,650	232	2,320			877	8,770			32
	781,510	47,071	20,100	1,206					33
	148,900	7,445	754,700	22,642			85,000	3,115	34
7,455	112,970	11,297	2,956,200	295,620			6,749,100	399,065	35
	32,800	3,280							36
16,536	6,675	667							37
3,225	7,178	107,670			3,853	57,795			38
43,260	12,000	1,440			64,000	7,680			39
864	133,115	7,987	329,000	26,320			498,000	49,800	40
900			22,020	15,464			37,000	37,000	41
601,203	798,800	199,700			2,289,288	572,322			42
112,390	85	425			440	3,080			43
89,520					14,988	89,928			44
248,252		320				98,254			45
4,376					148	592			46
25,980					435	1,110			47
	1,304,230	27,586	2,707,000	108,890			9,971,250	260,690	48
									49
90	433,434	41,793							50
190,261	117,869	176,804			45,127	67,690			51
107,245	147,210	73,605			2,475	2,475			52
17,059	419,598	125,879			12,545	3,764			53
4,995,225		2,175,035		1,734,856		1,168,939		1,492,923	

* Add \$6,720 value of Dulse in Charlotte Co., N.B.

† Add 193 Beluya skins, \$772.

‡ Including home consumption.

RECAPITULATION showing the Total Value of the Fisheries in the respective Provinces of Canada, from 1870 to 1906 inclusive, as compiled from the Annual Reports of the Department of Fisheries.

Year.	Nova Scotia.	New Brunswick.	Prince Edward Island.	Quebec.	Ontario.	British Columbia.	Manitoba and Northwest Territories.	Total for Canada.
	\$	\$	\$	\$	\$	\$	\$	\$
1870.....	4,019,425	1,131,433	No data.	1,161,551	264,982	No data.	No data.	6,577,391
1871.....	5,101,030	1,185,033	"	1,093,612	193,524	"	"	7,573,199
1872.....	6,016,835	1,965,459	"	1,320,189	267,633	"	"	9,570,116
1873.....	6,577,085	2,285,662	267,595	1,391,564	293,091	"	"	10,754,997
1874.....	6,652,302	2,685,794	288,863	1,608,660	446,267	"	"	11,681,886
1875.....	5,573,851	2,427,654	298,927	1,536,759	453,194	"	"	10,350,385
1876.....	6,029,050	1,953,389	494,967	2,097,668	437,229	"	"	11,117,000
1877.....	5,527,858	2,133,297	763,036	2,560,147	438,223	104,697	"	12,005,934
1878.....	6,131,600	2,305,790	840,344	2,664,055	348,122	583,433	"	13,215,678
1879.....	5,732,937	2,554,722	1,402,301	2,820,395	367,133	925,767	"	13,215,678
1880.....	6,291,061	2,744,447	1,675,089	2,631,556	444,491	631,766	"	13,529,254
1881.....	6,214,782	2,930,904	1,955,290	2,751,962	509,903	713,335	"	14,499,979
1882.....	7,131,418	3,192,339	1,835,687	1,976,516	825,457	1,454,321	"	15,817,162
1883.....	7,689,374	3,185,674	1,272,468	2,138,997	1,027,033	1,842,675	"	16,958,192
1884.....	8,763,779	3,730,454	1,085,619	1,694,561	1,133,724	1,644,646	"	17,766,404
1885.....	8,283,922	4,005,431	1,298,430	1,719,460	1,342,692	1,358,957	"	17,722,973
1886.....	8,415,362	4,180,227	1,141,991	1,741,382	1,435,998	1,077,348	186,980	18,679,288
1887.....	8,379,782	3,359,507	1,037,426	1,773,567	1,531,850	1,974,887	129,084	18,386,103
1888.....	7,817,030	2,941,863	876,862	1,800,012	1,839,869	1,902,195	180,677	17,418,510
1889.....	6,346,722	3,067,039	886,430	1,876,194	1,963,123	3,348,067	167,679	17,655,256
1890.....	6,636,444	2,699,055	1,041,109	1,615,119	2,009,637	3,481,432	232,104	17,714,902
1891.....	7,011,500	3,571,050	1,238,733	2,008,678	1,806,389	3,008,755	332,969	18,977,878
1892.....	6,340,724	3,203,922	1,179,856	2,236,732	2,042,198	2,849,483	1,088,254	20,680,661
1893.....	6,407,279	3,746,121	1,133,368	2,218,905	1,694,930	4,443,963	1,042,093	20,941,171
1894.....	6,547,387	4,351,536	1,119,738	2,303,386	1,639,968	3,950,478	787,087	20,719,573
1895.....	6,213,131	4,403,158	976,836	1,867,920	1,584,473	4,401,354	752,466	20,199,338
1896.....	6,070,835	4,799,433	976,126	2,025,754	1,605,674	4,183,999	745,543	20,407,425
1897.....	8,090,346	3,934,135	954,949	1,737,011	1,233,822	6,138,865	638,416	22,783,546
1898.....	7,226,034	3,849,337	1,070,202	1,761,440	1,433,632	3,713,101	613,355	19,667,121
1899.....	7,347,604	4,119,891	1,043,645	1,953,134	1,590,447	5,214,074	622,911	21,591,706
1900.....	7,809,152	3,769,742	1,059,193	1,989,279	1,333,294	4,878,820	718,159	21,557,639
1901.....	7,989,548	4,193,264	1,050,623	2,174,459	1,428,078	7,042,771	958,410	25,737,153
1902.....	7,351,753	3,912,514	887,024	2,069,175	1,265,706	5,284,824	1,138,487	21,959,433
1903.....	7,841,602	4,186,800	1,099,510	2,211,792	1,535,144	4,748,365	1,478,665	23,101,878
1904.....	7,287,099	4,671,084	1,077,546	1,751,397	1,793,229	5,219,107	1,716,977	23,516,439
1905.....	8,259,085	4,847,090	998,922	2,003,716	1,708,963	9,891,216	1,811,570	29,479,562
1906.....	7,799,160	4,905,225	1,168,939	2,175,035	1,734,856	7,003,847	1,492,923	26,279,485
Total	254,943,748	123,329,425	35,452,644	72,371,739	43,079,978	105,452,386	16,894,759	651,724,709

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CAPITAL INVESTED IN THE FISHING INDUSTRY OF CANADA; NUMBER OF MEN EMPLOYED,
FOR THE YEAR 1906.

During the fishing season of 1906 no less than 76,100 men were engaged in the Canadian fisheries, not including the thousands of persons employed in the lobster industry. These fishermen used nearly seven million fathoms of gill-nets and seines besides other fishing gear and fixtures representing an aggregate capital of \$14,555,565, being an excess of over one million and a half over the outlay of the previous season.

The lobster plant alone is valued at nearly one million and a half dollars, comprising all the equipment of the seven hundred canneries dispersed on the sea-coast of the maritime provinces as follows: Nova Scotia, 238; New Brunswick, 197; Prince Edward Island, 188, and Quebec, 78.

This industry placed on the market over ten million cans of this preserved crustacean, besides about an equal number of pounds disposed of alive or in a fresh state, mostly in American cities, both aggregating a value of \$3,422,900.

The other important branch of salmon preserving on the Pacific coast during the same period, consisting of seventy-seven canneries, valued with all their equipment at \$1,757,000, gave employment to 14,665 persons and placed on the market over thirty million pounds of canned salmon, besides over twenty million pounds disposed of fresh or salted. Thus the whole aggregated nearly fifty-one million pounds of this King fish, valued altogether at five million dollars.

Not including the sealing fleet (which is still valued at \$393,000 with its boats and other equipments) the remaining invested capital in canning and other fishery industries is given at \$2,205,000.

Only sixteen vessels of the sealing fleet were hunting seals during the 1906 season, securing 10,368 skins valued at \$316,224, an average of over \$30 per skin.

RECAPITULATION

Of the Value of Fishing Implements, Vessels, Boats, Nets, &c., including all capital invested in the fishing industry of Canada, for the year 1906.

PROVINCES.	FISHERMEN.		VESSELS.		BOATS.		NETS AND SEINES.		Value of traps and pound-nets, weirs, trawls, &c.	Value of lobster plant, &c.	Approximate value of freezers, fisheries and other fixtures.	Total Value.
	Vessels.	Boats.	Number.	Tonnage.	Value.	Number.	Value.	Rathorns.	Value.			
Nova Scotia.	5,454	18,752	700	23,042	1,137,465	14,636	394,768	1,781,221	713,569	291,802	673,012	\$ 4,529,301
British Columbia.	+ 341 529	14,665	+ 37 108	2,520 2,800	370,000 620,750	5,242	5,800 346,915	879,510	554,674	446,225	.....	\$ 4,591,560
New Brunswick.	1,461	13,016	349	4,938	176,675	7,651	281,780	872,050	436,334	339,483	362,050	\$ 2,171,083
Quebec.	194	11,699	38	1,657	36,865	7,033	22,525	332,943	210,201	250,351	110,228	\$ 1,207,515
Ontario.	671	2,414	+136	2,705	313,200	1,394	117,251	1,953,215	279,400	152,457	.....	\$ 942,910
Prince Edward Island.	177	3,400	34	756	14,020	1,925	55,715	113,538	47,676	16,256	300,857	\$ 26,170
Manitoba.	220	1,240	+34	2,350	166,500	633	25,020	798,257	169,060	4,560	.....	\$ 246,700
Saskatchewan.	11	802	3	51	6,400	780	9,300	59,550	9,905	4,300	.....	\$ 1,110
Alberta. ....	.....	1,658	.....	.....	.....	340	3,300	55,010	5,522	.....	.....	\$ 9,647
Totals.	8,458	67,646	1,439	40,827	2,841,875	39,634	1,462,374	6,947,294	2,426,341	1,506,259	1,446,147	\$ 14,555,565

+ Sealing fleet ; also dories \$23,500 and equipment, \$17,300. † Mostly tugs.

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RECAPITULATION.

STATEMENT of the Lobster industry in Canada during the season of 1906.

Provinces.	Number of persons employed in Canneries.	PLANT.				CATCH.					
		Number of Canneries.	Value.	Number of Traps.	Value.	Total value of Plant.	Number of Cans.	Value.	Fresh or Alive.	Value.	Total value of whole catch.
			\$		\$	\$	Lbs.	\$	Cwt.	\$	\$
Nova Scotia.....	3,658	238	226,820	600,125	446,192	673,012	4,595,816	1,148,954	87,956	784,853	1,933,807
New Brunswick.....	5,025	197	118,600	253,411	243,450	362,050	2,420,860	601,203	12,889	112,390	713,593
Prince Edward Island.....	2,211	188	96,650	312,945	204,207	300,857	2,289,288	572,322	440	3,080	575,402
Quebec.....	1,423	78	54,650	89,635	55,578	110,228	798,800	199,700	85	425	200,125
Totals.....	12,317	701	496,720	1,256,116	949,427	1,446,147	10,104,764	2,522,179	101,370	900,748	3,422,927

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COMPARATIVE TABLE showing Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries of Canada, together with the Value of Fishing Materials employed, from 1880 to 1906.

Year.	VESSELS.			BOATS.		Value of Nets and Seines.	Value of other Fishing Material.	Total of Capital Invested.
	No.	Tonnage.	Value.	No.	Value.			
			\$		\$	\$	\$	\$
1880.....	1,181	45,323	1,814,688	25,266	716,352	985,978	419,564	3,936,582
1881.....	1,120	48,389	1,765,870	26,108	696,710	970,617	679,852	4,113,049
1882.....	1,140	42,845	1,749,717	26,747	833,137	1,351,193	823,938	4,757,985
1883.....	1,198	48,106	2,023,045	25,825	733,186	1,243,366	1,070,930	5,120,527
1884.....	1,182	42,747	1,866,711	24,287	741,727	1,191,579	1,224,646	5,014,663
1885.....	1,177	48,728	2,021,633	28,472	852,257	1,219,284	2,604,285	6,697,459
1886.....	1,133	44,605	1,890,411	28,187	850,545	1,263,152	2,720,187	6,814,295
1887.....	1,168	44,845	1,989,840	28,092	875,316	1,499,328	2,384,356	6,748,840
1888.....	1,137	33,247	2,017,558	27,384	859,953	1,594,992	2,390,502	6,863,005
1889.....	1,100	44,936	2,064,918	29,555	965,010	1,591,085	2,149,138	6,770,151
1890.....	1,069	43,084	2,152,790	29,803	924,346	1,695,358	2,600,147	7,372,641
1891.....	1,027	39,377	2,125,355	30,438	1,007,815	1,644,892	2,598,124	7,376,186
1892.....	988	37,205	2,112,875	30,513	1,041,972	1,475,043	3,017,945	7,647,835
1893.....	1,104	40,096	2,246,373	31,508	955,109	1,637,707	3,174,404	8,681,557
1894.....	1,178	41,768	2,409,029	34,102	1,009,189	1,921,352	4,099,546	9,439,116
1895.....	1,121	37,829	2,318,290	34,268	1,014,057	1,713,190	4,208,311	9,253,848
1896.....	1,217	42,447	2,041,130	35,398	1,110,920	2,146,934	4,527,267	9,826,251
1897.....	1,184	40,679	1,701,239	37,693	1,128,682	1,955,304	4,585,569	9,370,794
1898.....	1,154	38,011	1,707,180	38,675	1,136,943	2,075,928	4,940,046	9,860,097
1899.....	1,178	38,508	1,716,973	38,538	1,195,856	2,162,876	5,074,135	10,149,840
1900.....	1,212	41,307	1,940,329	38,930	1,248,171	2,405,860	5,395,765	10,990,125
1901.....	1,231	40,358	2,417,680	38,186	1,212,297	2,312,187	5,549,136	11,491,300
1902.....	1,296	49,888	2,620,661	41,667	1,199,598	2,103,621	5,382,079	11,305,959
1903.....	1,343	42,712	2,755,150	40,943	1,338,003	2,305,444	5,842,857	12,241,454
1904.....	1,316	43,025	2,592,527	41,838	1,376,165	2,189,666	6,198,584	12,356,942
1905.....	1,384	41,640	2,813,834	41,463	1,373,337	2,310,503	6,383,218	12,880,897
1906.....	1,439	40,827	2,841,875	39,634	1,462,374	2,426,341	7,824,975	14,555,565

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COMPARATIVE TABLE showing the Number of Men employed in the Fishing Industry since 1895.

Year.	Number of Persons in Lobster Canneries.	Number of Men in Vessels.	Number of Men in Boats.	Total Number of Fishermen.	Total Number of Persons in Fishing Industry.
1895.....	13,030	9,804	61,530	71,334	84,364
1896.....	14,175	9,735	65,502	75,237	89,412
1897.....	15,165	8,879	70,080	78,959	94,124
1898.....	16,548	8,657	72,877	81,534	98,082
1899.....	18,708	8,970	70,893	79,893	98,601
1900.....	18,205	9,205	71,859	81,064	99,269
1901.....	15,315	9,148	69,142	78,290	93,605
1902.....	13,563	9,123	68,678	77,801	91,364
1903.....	14,018	9,304	69,830	79,134	93,152
1904.....	13,981	9,236	68,109	77,345	91,326
1905.....	14,037	9,366	73,505	82,871	96,908
1906.....	12,317	8,458	67,646	76,104	88,421

FISH-BREEDING.

The report on fish-breeding by Commissioner Prince for the year 1907 forms Appendix eleven of this publication. It embraces a general review of the operations carried on in the fall of last year and the spring of 1907, such as the capture of parent fish, collection of ova and the incubation and planting of the fry of the various species now propagated in the waters of the Dominion.

New hatcheries have been steadily added of recent years in the different provinces of Canada so that our establishments, including the breeding ponds, now aggregate thirty-four.

This spring over 800 million fry were distributed from these different establishments by their respective officers in a satisfactory manner without much loss or serious accidents. Over half of these fry were young lobsters, the balance consisting of white-fish, salmon, trout and pickerel.

Brief reports from the different officers connected with this important branch of the service will be found in the above mentioned appendix.

OYSTER CULTURE.

As an annex of the fish culture report will be found a full report of the season's work on the cultivation of oysters by the department's expert.

Mr. Kemp devoted most of his summer in examining and clearing oyster areas in the maritime provinces, mostly at Caraquet, Murray Harbour and Cape Breton.

BEHRING SEA QUESTION AND PELAGIC SEALING.

Since the publication of the last annual report, there have been no new developments in this question, and the industry has continued under the same conditions as previously.

During the present year fifteen vessels cleared from Victoria, British Columbia, to engage in this fishery, and made a total catch of 5,397 seals, 2,091 of which represent the coast catch, 448 the Asiatic catch, and 2,858 the Behring sea catch.

In addition to the Pacific fur-seal industry, a fishery of very considerable importance has been conducted for the last few years in the South Atlantic ocean, in the vicinity of the Falkland islands.

Eight Canadian vessels are now engaged in this fishery, their port of clearance being Halifax, Nova Scotia, but at this date, the department has not received the statistics of the catches made by them this year.

BAIT FREEZERS.

The Fisheries Report for 1900, p. ix., contains a full report upon the inauguration of this system of cold storage for bait.

The report of the officer in charge of the freezers in the maritime provinces for the current season (1907) forms Appendix No. 12 of this report.

Twelve new freezers have been completed during the last twelve months; seven in Nova Scotia; one in New Brunswick and four in Quebec; two of the latter are in the Magdalen islands.

Altogether there are now thirty seven bait-freezers in Nova Scotia; three in New Brunswick; five in Prince Edward Island, and fourteen in Quebec, all in the counties of Bonaventure and Gaspé.

The prejudice held by fishermen generally against frozen bait seems to be gradually waning, and its adoption by nearly every one in need of bait will soon become an accomplished fact in every fishing centre.

FISHERIES PROTECTION SERVICE.

Since the change of the date of the fiscal year and early preparation of the annual report for parliament, it now becomes impossible to prepare and publish a report of this service for the current season. The report of this service forming Appendix No. 12 of this publication is for the season of 1906.

The same cruisers, with mostly the same commanding officers as the year before, again patrolled our Atlantic coast, the *Kestrel* and *Falcon* in the Pacific waters, and the *Vigilant* in Lake Erie.

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A glance at the long list of foreign fishing vessels calling and using our ports (p. 302) will prove their importance to this foreign fleet. No less than two hundred and fifty-seven United States fishing vessels of an average tonnage of seventy-seven tons, and with about eighteen men each, called at sixteen of our principal ports twelve hundred and sixty times.

During the current season only one fishing schooner from United States was seized by Commander Knowlton for fishing within the three-mile limit. She was afterwards released on payment of fine.

OTTAWA FISHERIES MUSEUM.

Mr. A. Halket, the curator of the museum, submits a general summary of the collection of specimens with description of the vertebrate portion, especially the fishes.

This article forms appendix 14 of this report and will be a valuable addition to a first report published in 1905.

THE FISHERIES STAFF.

The outside staff of the Fisheries Branch of this department numbers nearly one thousand; twenty-four inspectors of fisheries and special officers; 112 overseers with magisterial powers *ex officio*, and 452 guardians temporarily employed to assist in the protection of fish.

The officers in charge of our thirty-four fish-culture establishments, with their permanent assistants, aggregate over 80 employees, not including many others required during the busy season. The officers and crews of our protection fleet of cruisers aggregate 270 men. There are also about 45 persons employed as reporters for the Intelligence Bureau during the fishing season who are not otherwise connected with government work.

A complete list of these different fishery officers will form appendix No. 16 of this report.

FISHING SEASON OF 1907.

PRELIMINARY REPORTS OF THE DIFFERENT INSPECTORS OF FISHERIES.

GENERAL REMARKS.

As the fishery statistics published every year are a few months old, it has been customary to request all our inspectors to briefly summarize the prospects of the current season's fishing operations. Now that the preparation of our annual report is somewhat advanced for the early sessions of parliament, these preliminary reports are prepared earlier, even when some fishing is still carried on, and cannot be considered as complete as formerly. However, a glance at these advanced reports will give a fair idea of coming fishery results.

The complaint of late spring and stormy weather seems almost general on the Atlantic coast, hence fishery operations were either delayed or interfered with by storms, &c. This will no doubt cause a shortage in the fishery production, notwithstanding that fish, though late in coming, seemed as abundant as ever.

In the Bay of Fundy the yield will be even above the average, with perhaps the exception of herring to be smoked.

Dogfish were much less in evidence than in previous seasons, and from appearance, these pests are seeking other grounds.

In British Columbia, the great salmon packing industry will not even come up to the decreased supply of 1906. Other branches of the piscine industry as halibut and herring will prove quite remunerative.

The whaling industry also gave very satisfactory results.

The western inland provinces also report a backward spring and poor fishing. Hence no improvement is expected from those quarters.

NOVA SCOTIA.

Inspector A. C. Bertram, of North Sydney, C B., reports that a feature of the fishing in the Cape Breton Island district for 1907 has been the unfavourable weather for the operation of this industry. Not for twenty-eight years has there been such unfavourable weather conditions. First, by having gulf and Arctic ice kept on the coast by adverse winds and tides until the end of May, and since by heavy winds. Had it not been for unfavourable weather conditions the season would have been good. Fish of all kinds were abundant, and on sections of the coast (particularly on the western

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coast), where ice did not interfere, the lobster pack exceeded that of the previous year by at least forty per cent. The supply of lobsters everywhere in the Cape Breton district was as plentiful as in any previous year for the past twelve.

In other leading branches of the fishery there was no scarcity of fish and bait, in particular the supply of spring herring and squid was good. Thus, were it not for weather and ice conditions, the season would have been a good one. Cod and haddock were particularly plentiful. The June mackerel catch was good. The midsummer fat herring fishery was better than in previous years. This fact is accounted for by the absence of dogfish on the coast in July and August. Later, however, these fish appeared, but not in such great numbers as in previous years.

The commercial demand for fish was good and the prices in advance of previous years. Had it been an average season as far as climate conditions are concerned, the season of 1907 would have been exceptionally profitable for those engaged in the industry.

Inspector R. Hockin, of Pictou, N.S., reports that the results of the fishing operations in district No. 2 for the season of 1907 is expected to be an average one.

The salmon fishery last year yielded more satisfactory returns than for many years, and for the present season it is expected to be fully up to last year.

There may be a slight decrease in the cod, haddock, pollock and hake fisheries, but it will be a small percentage.

The herring fishery will yield about the same, but mackerel will show a decrease of about 20 per cent.

The lobster canning is about the same as last year.

The excellent shad fishery of former years appears to be going steadily, and unless something can be done to save it, it will be gone in a few years.

Inspector A. C. Robertson, of Barrington Passage, N.S., reports as follows:—The lobster fishery, which is the most extensively prosecuted branch in my inspectorate was fully up to the average when weather conditions would allow fishermen to operate. A succession of storms during the winter and early spring caused much damage to traps, and in exposed positions the loss of boats.

Numerous applications were made to your department for an extension of the open season, which the department declined to grant, and I think that the general consensus of opinion among both fishermen and packers to-day is that the decision was a wise one.

Line Fishing.—Line fishing for cod, pollock, haddock and hake when bait was available is well up to an average catch.

Mackerel, which was at one time one of the most important fisheries in my district, more especially in the counties of Shelburne and Yarmouth, and which had become almost depleted, shows a marked increase.

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Herring fishery, which at some seasons is excessively large, was not up to the average.

Shad fishing is prosecuted chiefly in the counties of Annapolis and Kings, and the overseers report a better condition for the past year.

Salmon and alewives.—The salmon fishery shows a marked increase. The alewife fishery is not up to the average. The catch of trout, which was formerly exported to the United States, shows a marked increase since the exportation was prohibited by your department.

Clams.—This fishery, which is prosecuted chiefly in the counties of Annapolis and Digby, was fairly remunerative. The close season which the department adopted is a wise enactment, and will have the effect of preserving a fishery which otherwise would have been depleted.

The efforts of your department in the way of improved methods for curing fish have not received the consideration from the fishermen that they deserve.

The dogfish reduction works in course of construction at Cape Sable island will prove a great boon to the fishermen, not only from the standpoint of revenue, but will be an aid to diminish what has been a pest, more especially to the successful prosecution of the herring fishery with gill-nets.

NEW BRUNSWICK.

*Inspector J. F. Calder, of Campobello, N.B., reports as follows:—*With a few exceptions, this has been a banner year for the fishing industry. A very late spring seriously retarded the operations of the lobster fishermen, but I am of the opinion that the total catch will equal that of 1906. The only branch of our principal fisheries that has not attained success, is the smoked herring business, principally at Grand Manan, but of late good catches are being made, and I am hopeful that they may get a good run during November.

Sardines.—The total catch of these will be greatly in excess of that of last year. Fair prices have prevailed and on the whole, it has been a very satisfactory year for the industry, as the sardine herring have been caught in paying quantities in all parts of the county of Charlotte.

Cod.—A large increase in the catch for this season as compared with that of the previous year.

Pollock.—The hand-line fishermen have done better than last year, but the weirs at Campobello took very few, and as a whole there will very little difference in the catch of 1907 and the catch of 1906. Prices have been exceptionally high.

Hake and haddock.—The season of 1907 will long be remembered as the most profitable one this fishery has ever experienced. I am of the opinion that the increase will be fully 300 per cent. Prices have been very high, and hake sounds sold for 50 cents per pound, the highest price for twenty years.

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Herring.—As already pointed out, the run of herring suitable for smoking purposes has, so far, been very poor, but there are prospects of a fair catch this fall, provided the weather does not get too severe. The catch of large herring on the Rippings was also very light. They acted very peculiarly; they would 'school' in abundance for a day or two and then probably not again for a week.

Dogfish.—The fishermen have had very little trouble from this pest this year.

Salmon.—The extremely bad weather during the spring and early summer made it impossible for the drift-net fishermen to carry on their work successfully. Sometimes they would not get out for three or four days at a time, yet I think the catch will equal that of 1906. High prices were paid and those engaged in this fishery had a profitable year.

Alewives.—Small catch, due to bad weather; high prices.

Remarks.—At the present, I do not feel in a position to make an estimate of the total value of the different fisheries of this district, but I am sure that making due allowance for the present shortage in the output of 'smoked herring' at Grand Manan, it will equal 1906, and if the fall fishing at Grand Manan comes up to expectations, it will greatly exceed it.

*Inspector R. A. Chapman, of Moncton, N.B., reports as follows:—*Shad.—About the usual quantity have been caught, with prices enormously high.

Salmon.—Scarcely as many have been taken as last year, owing to rough weather, but the streams are swarming with them this fall.

Herring.—Spring herring were if possible more than usually plentiful everywhere on our coasts, the fall run on the Caraquet banks was good, but they were not so plentiful on the Miscou banks.

Cod.—The catch of codfish was a fair one, with unusually high prices, but owing to wet weather the fishermen had much trouble in drying their fish.

Smelts.—This fishing was better in the aggregate last winter than the year before, and prices higher than ever.

Mackerel.—The catch was above the average of late years.

Quahaugs.—Owing to close season not so many were raked as previous year.

Oysters.—It is too early to say much about oysters, as the season now only opens October 1.

Lobsters.—A larger pack was made in every subdistrict than for many years, in all 10,560 cases more were labelled than in 1906, and nearly 17,000 more than in 1904; prices higher than ever before; it is reported that they are now selling wholesale at seventeen dollars per case; the increased pack of this year over last in value will amount to nearly \$150,000.

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Taking into account the high prices obtained for all kinds of fish, it has been a profitable year notwithstanding the unusually rough season, which I believe was the worst in this respect that we have had for a great many years.

Inspector H. E. Harrison, of Fredericton, N.B., says that the inland fisheries of New Brunswick (district No. 3), are somewhat disappointing.

The quantity of salmon taken in the St. John river and tributaries this season, I believe, is considerably less than in 1906. However, I am firmly of the opinion that the reason is not because of fewer fish in these waters, but on the contrary, I have good reason to believe salmon are increasing.

The principal reason, I feel, is the high and very rough condition of the water. I have just been told by a salmon fisherman that it was the best season's fishing he ever had; this, however, has not been the general verdict, as high water has interfered with the setting of many nets to advantage. Also, I believe more vigilance has been displayed in protection, consequently less illegal fishing.

The fly surface fishing also has been very disappointing.

Shad fishing was not as satisfactory as regards quantity taken as formerly. It is believed in my district, at least, that shad have a difficulty in getting round the array of long nets at the mouth of the St. John river. The price of this fish, in the fresh state, has about doubled in three years.

The quantity of alewives taken in my district is also decreasing each succeeding year. Fishermen think that they are either going in some other direction or being over fished.

Trout fishing is reported from fair to extra good.

To my surprise, the catch of sturgeon this season is reported much less than in 1906. I cannot give any plausible reason for this, as this fishery, while it has been slow, nevertheless has shown considerable improvement in late years, and I hoped would eventually recover to its proportion of some twenty years ago. The season's yield will likely be under the average.

PRINCE EDWARD ISLAND.

Inspector J. A. Matheson, Charlottetown, P.E.I., reports as follows:—

Canned Lobster.—This industry shows an increase over the season of 1906 of ten thousand five hundred and sixty-one cases of forty-eight pounds.

The catch of cod and hake is about twenty per cent more this season in Queens and Kings counties; in Prince county is about the same as last year.

A small increase in catch of mackerel in Queens county; in Prince county about the same as last year. Up to the present time there is a decrease in Kings county of about five hundred barrels.

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Salted Herring and Herring for Bait.—There is an increase of about twenty per cent in Kings county; in Queens county about the same as last year; in Prince county up to the present time is short of last year about twelve hundred barrels.

The quantity of quahaugs fished this year is about the same as that taken last year.

The season for oysters opened later this year than last (1906), but from the quantity fished up to this time, it is estimated that not more than half the quantity will be fished this year.

QUEBEC.

Commander Wakeham, officer in charge of the Gulf of St. Lawrence Division, province of Quebec, reports that the season of 1907 has been an altogether abnormal one. Following a very severe winter, the spring was late, and owing to the continuance of northeast winds, the ice, which was unusually heavy, was held in the southern portion of the gulf until after the middle of May. The C.G.S. *Princess*, which wintered in Pictou, N.S., could only get out of that harbour on May 21, and then had to work her way through some fifty miles of ice to open water. The rivers were late in opening up; in some of them, on the north coast, the ice only ran out at the end of May. After such a severe winter and late spring, every one looked forward to a warm summer, but the reverse was the case, as we had practically no summer. Hopeful and sanguine people then counted on a fine open fall, but here again we are disappointed, as at the present writing, October 21, grain which should have been harvested a month ago is being cut green. We have already had snow, 12 degrees of frost, and cold, boisterous weather, so much so, that there has been practically no fall fishery.

In the face of such conditions, it is not surprising that all branches of the fishery should show a falling off.

Spring herring were late in coming into the gulf, and owing to the ice conditions very few vessels visited the Magdalen islands for the first baiting. Herring were, however, constant through the season, especially along the shores of Bonaventure and Gaspé, so that those who have been complaining that the practice of taking herring and herring spawn, for manure, had diminished the herring supply, must find some other cause for the occasional scarcity of herring, inshore, in summer.

Cod-fishing began about the usual season, and these fish were abundant on the south coast, bait being constant a good fishery was made. On the north coast the fishery was an average one, from Pointe des Monts to Mingan; from Mingan to St. Augustin, on the Labrador, the summer fishery was a failure, owing to the absence of the capelin; from St. Augustin to Blancs Sablons, and on out through the Strait of Belle Isle the fishery was most abundant, as the capelin struck this part of the Labrador in enormous quantities, especially from the 15th to the end of July. Cod were everywhere plentiful in the fall, but owing to the constant rough weather, the fall catch has not amounted to anything worth while. Owing to the wet sunless season, it was difficult to cure fish, and the proportion of bad fish which has been made is great. There has

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been an unusual demand for fish, outside traders have visited the coast in large numbers and are buying fish without cull. This has been going on for some time, and is having a very bad effect on the fishermen, as it makes them careless as to how they cure the fish.

The salmon net fishery has been a poor one, the salmon were late in striking the coast, and in many places, exposed to easterly winds, it was impossible to keep the nets out. The early sport fishing was poor as the fish had not run in, while the rivers were abnormally high, owing to the almost daily rains; towards the close of the season, when the rivers fell, those who were fortunate enough to have held on, had splendid fishing. It has been remarked all over the gulf that the salmon were not as fat as usual, they were also light in colour and lacking in flavour.

The season was not a favourable one for lobster fishing, and there was considerable loss of gear on all grounds exposed to easterly winds, yet in the face of the conditions the pack must be considered a fair one.

Mackerel were late in coming into the gulf, but the early fishery was a good one—the late fishery, for fat mackerel, was poor, and as one might have expected, viewing the rough cold weather which prevailed, the fish left the gulf fully two weeks earlier than usual.

In spite of all these unfavourable circumstances, those who stuck to the fishing have done well; prices have been so high. Lobsters sold at from \$14 to \$15 per case. Mackerel are bringing on the coast \$16 per barrel, while cod have brought \$5.50 per cwt., as I have before said, practically without cull.

The people are generally well provided for the winter; there is an unlimited demand for labour, in fact enough men cannot be found to do the work offering, while wages are more than double what they used to be a few years ago. I only know of a few families unsupplied for the winter, these same families are, however, always in need, and fortunately their neighbours are amply able to keep them going till the traders come round again in the spring.

Inspector J. Riendeau, of Montreal, states that in his division there is no visible progress to be ascertained as to the yield of the fish, yet he hopes for a future increase in the counties of Champlain, St. Maurice and Nicolet, the fishermen of these places beginning to understand that it is more profitable to work at other things than at fishing only.

In the county of Yamaska, the game fish was not as abundant as last year. The same may be said for the counties of Maskinonge and Berthier on account of the excess of the hoop nets used in these waters. All around Lake St. Peter the aggregate of mixed soft fish has been fair, though the fish were very small; game fish being very scarce and hardly any sturgeons reported.

In L'Assomption and Terrebonne counties an increase is ascertained, especially the trout attributed to the prohibition in the transportation of said fish to the United States.

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In the counties of Vercheres, Chambly and Laprairie, the prospects are better, there being no netting now. In 'La Tortue river,' there were more black bass caught than for many years past.

Around Montreal, Lake St. Louis is getting fairly good, principally in Chateauguay river, the black bass was plentiful; over 15,000 were caught up to date, this may be explained by the absence of nets in the mouth of the river or around it.

In Lake St. Francis there is much improvement in the quantity and growth of fish and the prospects are better. Sporting men report that never was a greater quantity of bass taken in the rapids of the Cascade des Cedres and Coteau du Lac. In short, Lake St. Francis and its surroundings gave good results, excepting sturgeon, which is on the decrease.

In Lake of Two Mountains fish was very scarce, it is pretty much ruined both in game and soft fish altogether. It is to be hoped that with the new regulation it will soon improve.

After the new regulations come in operation, I hope to report good progress in all this district. I may add also that all around my division, I could not ascertain any progress about pickerel and maskinonge, owing to their being caught in an immature condition. If the local fish overseers should take more care and attend to their duties, the results would be much more satisfactory.

Inspector A. H. Belliveau, of Ottawa, expects another falling off in the inland waters of Quebec for the present season. Spring was very late, and the ice remained a long time on the lakes and streams. The better kinds of fish are becoming scarcer and making way to coarser grades which now predominate in these inland waters.

Exhaustive net fishing, especially with small meshed implements, has no doubt brought on this result.

The waters of Lake Two Mountains, which is an enlargement of the Ottawa river, a good spawning ground, have been protected from further abuses. Netting of any kind is now prohibited in that large expanse of water comprising River Jesus and des Prairies to the St. Lawrence.

The only part of my district which does not show serious decline is Missisquoi bay, where another fair capture of fish was effected last spring.

Bass angling was again reported quite good in that part of Richelieu river above Iberville. The same may be said of the great eel weirs of that locality, which again yielded remuneratively.

ONTARIO.

Inspector of Fisheries J. M. Hurley, of Belleville, says that the spring fishing has been better than usual this year and rough fish of all kinds, especially pike, pickerel and bullheads, have been on the increase. Several fishermen have taken as high as two thousand pounds in one week.

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Sporting fish have also been more plentiful and the bass fishing in the Bay of Quinte and inland lakes has been better than it has been for many years previously. It has been reported to me that several lakes that have been stocked from the Quinte Bass Pond are this year giving good results. The operations at these ponds during the present year have resulted in the distribution of a splendid lot of young bass which had attained the length of four inches at the age of four months.

Whitefish made their appearance this year two weeks earlier than usual and are now coming into the bay in large numbers.

The provincial government had a patrol boat, on the Bay of Quinte and the Lake Ontario waters, in the vicinity of Prince Edward county, during the summer close season, which filled a long felt want. The fishermen now understand the regulations better than ever before and are determined that the same shall be observed by all.

Inspector O. B. Sheppard, of Toronto, says, from all the information at my disposal I should judge the commercial fishing in my district shows a gradual decrease year by year; this was particularly noticeable in the early part of the season, but returns were somewhat better during the later part. The rod and line fishing was very good in some waters, while in others it showed a marked falling off; this was particularly noticeable in the waters of Georgian bay, while on many of the inland lakes it showed an improvement over last year. Many fishways have been constructed on dams across important streams during the season, which I think will have good results. The law has been fairly enforced, but there are still too many licenses being issued and unless some drastic action is taken in this respect very soon it will be too late to save our fisheries from certain ruin.

The carp in both international and inland waters are still increasing and doing incalculable damage to the game fisheries, as well as destroying the wild rice.

Inspector of Fisheries A. G. Duncan, of Sault Ste. Marie, reports as follows:— Although all the returns for the season of 1907 have not been received, it is very probable that the aggregate yield will surpass last year's; the fishermen attribute the increased catch to the prevalence of high winds during the season which kept the fish moving.

Herring fishing is on the increase.

There has been less illegal fishing by American poachers than last year, a number of seizures of trap-nets were made which have already been reported to the department. The regulations have been well enforced by the overseers, and a large number of seizures of nets being illegally fished have been made.

No complaints have reached me of violations of the Sawdust Act in my district.

About the same number of fishermen were engaged in the industry this year as last.

There has been an increase in the number of rod and line fishermen owing to the excellence of the sport during the past season in my district.

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Inspector W. S. Young, of Selkirk, Manitoba, reports as follows:—At the present time it is impossible to give an accurate account of the fisheries as to yield.

The whitefish fisheries will show a large falling off in the catch compared with the previous year, 1906. During the summer season, I expect a decrease of from twenty-five to forty per cent. This is accounted for by the lateness of season in opening up, there were no whitefish landed here in Selkirk this year until about the first day of July, in previous years we usually had the first consignment in by the first week in June. This practically cut off a month of the fore part of the season, and then after the season did open up, the weather conditions were very disastrous for a successful season's operations.

Pickeral, sturgeon, pike, catfish, goldeyes and sturgeon caviare, will show a yield equal to that of the summer season of 1906, in fact in some varieties I look for an increase.

If the coming winter season upholds its past records there will be no decrease in the yield of these valuable fishes except whitefish.

SASKATCHEWAN.

Inspector E. W. Miller, of Qu'Appelle, Sask., reports as follows:—An exceedingly late spring was followed by a cool backward summer, and in the southern portion of the province there was a considerable diminution in the amount of fishing carried on. Spring spawning fish in many of the lakes had only well begun spawning when this season opened. The sturgeon fishery for the export market was actively carried on in the Cumberland waters in July and August with satisfactory results. For the first time, the whitefish fishery was prosecuted in the summer season at Moose Lake, where a very heavy catch was made. For the winter season now opening preparations on an increased scale are being made at Jackfish, Turtle and Cold lakes in the Battleford district, and also for the trout lakes in the Prince Albert district; the output for the export market from these waters will probably be larger than in any previous year. Applications for licenses in the smaller lakes, fished for local consumption only, show a large increase, and the catch is likely to be larger than heretofore. All waters are in good shape.

ALBERTA.

Inspector Harrison S. Young, of Edmonton, Alta., reports as follows:—The creeks and rivers of the district have been high all summer. Fish were unusually late in spawning this spring, and had a good run in the creeks when they did start. Whitefish are reported plentiful in all lakes. Summer fishing has been carried on to a greater extent than usual in Pigeon lake and White Whale lake, and Lake Ste. Anne. The local market here and in towns along the Calgary and Edmonton railroad has been kept well supplied with fish. The cold summer weather rendered the transport of fish by wagon easier than usual, and fish were landed here in unusually good condition. A very thorough patrol of the district was made during the spring close season, and a good many trap-nets were destroyed and some bag-nets, but the owners as usual could not be found.

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As soon as guardians were appointed in the southern part of the district they started in to patrol their districts, and I trust their work will be effectual in stopping some of the evils that have been the source of complaint.

I hope the sale of trout will be stopped. At present every butcher's shop in Edmonton is supplied with lots of fine mountain trout, and this has been the case all the past month. I doubt very much if these fish were ever caught with a hook, but am afraid a dynamite cartridge is responsible for their death.

If people in southern Alberta who have knowledge of the regulations being broken would promptly give notice to the fishery officers, and be willing to give evidence in case of a prosecution, it would greatly help the fishery officers in putting down illegal fishing. Distances are great and fishery officers are few. It would take a small army of guardians to effectually police the trout streams of the district, but if the settlers will back up the officers by lodging information with them, much good can be accomplished. A guardian is yet required for the district around Calgary.

As all the lakes in the district are in good condition, and fish reported as plentiful all over, I can but anticipate a successful fishing season during the winter of the current year.

BRITISH COLUMBIA.

*Inspector C. B. Sword, of New Westminster, B C., reports:—*The take of fish in district of British Columbia for the current year, except in the case of the sockeye salmon, can only at this date be conjectural.

The pack of sockeye salmon for the Fraser river, including about 2,800 cases put up in Victoria, only amounted to 59,510 cases against 204,489 cases in 1903. On Puget Sound the pack was 87,000 cases against 151,828 cases in 1903.

The small take of sockeye, much less than the canners had made preparation for, caused several to utilize the later runs and the pack both of humpbacks and cohoes will show a considerable increase. Some of these have already been marketed at paying prices. The run of spring salmon was exceptionally good. Most of these, however, are exported fresh in ice, and in a frozen condition.

The take of cohoes was also very fair, and while some were canned, a considerable quantity was put up in a frozen condition for export later. This is considered a 'humpback,' and not a 'dog-salmon' year on the Fraser, but while the run of the former was exceptionally large there was a fair take of the latter, the market for which outside of the Indian consumption is mainly in Japan, to which they are sent in a 'dry salted' condition.

The sturgeon take which has been very small for several years now, has shown a great improvement this year, and there will be no falling off in the returns from the halibut fishing.

These items practically cover the fishing for this district, which does not now extend into the gulf further than Howe sound.

Other varieties may be assumed to be likely to give normal returns.

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Inspector E. G. Taylor, of Nanaimo, B.C., states that the fisheries carried on in his division have been fairly successful during the past year.

Many of the traps operating on the west coast of Vancouver island have made large catches of salmon, chiefly spring, cohoes and humpback. The run of humpbacks was phenomenal, and as it was a disappointing year for sockeye, a large number of the former were canned.

This has also been a banner year for spring salmon. The largest numbers were taken in the trap-nets on the west coast in the early part of the season. All the salmon taken in the trap-nets were fresh from the sea, and in condition and quality could not be surpassed. The canneries on the west coast of Vancouver island are not effected by the run of salmon to the Fraser river. The cannery at Clayoquot had a very successful sockeye season. The cannery in Victoria operated by the Capital City Canning and Packing Co., Ltd., put up the largest pack of salmon, being in the neighbourhood of 24,000 cases. The companies operating trap-nets on the west coast of Vancouver island were permitted to continue their fishing throughout the whole season, as past experience showed that practically no sockeye salmon were in these waters between August 25 and September 15, so that no harm could result to the sockeye fisheries of the Fraser. This season, from my own observation, and the information received from the fishery officers and fishermen, that no sockeye were taken in the traps at this time, while large numbers of cohoes and humpbacks were taken, and in prime condition, I would strongly recommend that the west coast be not included in the close season as passed by an order in council, August 22, 1904.

This has been a very successful year in the whaling industry. Two stations were in operation on the west coast of Vancouver island, at Sechart and Kyuquot. During the greater part of the summer the average daily catch was three whales at each of the stations. The station at Pages lagoon, near Nanaimo, is completed, and will be in operation during the winter months, the stations on the west coast closing down for the winter, owing to the stormy weather prevailing on the Pacific coast at this season of the year.

The herring industry has developed and is now one of the most important industries on the coast. The centre of this industry is at Nanaimo. At this point, the steamers engaged in the halibut fishing secure their bait. Between the years 1905 and 1906 about 25,000,000 lbs. of halibut were taken south of Cape Caution, by American vessels. This season very few halibut fishermen were seen off the west coast, and poaching has diminished to a great extent, this is owing to the vigilance of the cruiser *Kestrel*.

I have the honour to be, sir,

Your obedient servant,

F. GOURDEAU, Lt.-Col.,

Deputy Minister of Marine and Fisheries.



SPECIAL REPORTS

BY

PROFESSOR EDWARD E. PRINCE, F.R.S., CANADA,

*Dominion Commissioner of Fisheries, General Inspector of Fisheries, and Director of
the Biological Stations of Canada.*

I. THE LOCAL MOVEMENTS OF FISHES.

II. UNUTILIZED FISHERY PRODUCTS IN CANADA.

1907

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I

THE LOCAL MOVEMENTS OF FISHES.

By PROFESSOR EDWARD E. PRINCE, DOMINION COMMISSIONER OF FISHERIES, CHAIRMAN OF THE BRITISH COLUMBIA FISHERIES COMMISSION 1905-1907.

The belief long prevailed, and even now has wide currency, that fishes in the sea, or in lakes and rivers, are somewhat erratic and uncertain in their movements. It was admitted that the migrating schools of salmon showed regularity in the periods of their ascent of rivers, and had more or less fixed courses, while the vast armies of herring, off our British shores, were imagined to move from the Arctic ocean southwards with unerring certainty, skirting the Scottish and English coasts, to disappear in the depths of the sea.

ALLEGED UNCERTAIN MOVEMENTS OF FISH.

These two examples of regular and ordered migration were however held, by fishermen and authorities in general, only to emphasize the general feature of fortuity in the wanderings of the finny tribes, by their exceptional character.

To the scientific mind there appeared something incongruous in this alleged erratic and aimless migration. The order of nature is such that lives of all animated things, even man himself, are circumscribed by conditions and unalterable laws, and the migratory habits of fishes could hardly be an exception. The pursuit of fishing has always appeared one of the most uncertain possible, and this uncertainty in the capture of fish seemed to support the theory that no regular laws, or well-ordered conditions, governed the movements of the inhabitants of the deep.

TWO SUPPOSED CAUSES OF MIGRATION.

Two causes, it is true, were regarded as most potent in stimulating and directing the course of fish, viz.: the search for food, and the search for suitable spawning grounds. But while there is some foundation for this view, yet it will not, in strictness, apply to most cases, for appropriate food is very widespread, and not limited to special localities, excepting in very exceptional instances, while the discoveries of science in recent years have shown that the spawning process might be appropriately performed in almost any area through which migrating schools of fish may pass.

FISHES MOVE WITH FIXED REGULARITY.

Far from being erratic and wholly uncertain, the migrations of fishes exhibit in general the most astonishing regularity, and so true may they be to their particular migratory course, and to the period or, it may be even said, the exact date of their appearing, that some profound cause is evidently at work; some cause more potent than the search for a favourite feeding ground, or for an accustomed spawning resort. The purpose of this brief report is to show what this profound cause is, and to indicate some of the complex features which modern scientific studies upon fish life have revealed.

PRACTICAL BEARING OF THE QUESTION.

The subject is one of great practical moment, for the determination of wise preservative measures, and of appropriate fishery legislation, and even of far-reaching international fishery policy, depends upon an accurate knowledge of this subject, viz.: the real character of the movements of the schools of fishes in their native waters.

MIGRATIONS OF FRY.

The migratory movements of fishes begin immediately after they leave the egg. In fresh water the young hide in pebbly rough ground at the bottom, and move into smooth sheltered shallows, as soon as they are strong enough to swim with some vigour. At first they are weak, and in most cases swim with difficulty, owing to a large sac of food yolk attached to the underside of the body. In the sea, the yolk-sac may act as a float and the young fish wriggles along in a reversed attitude, back downwards. The fine-meshed tow-net of the naturalist captures immense numbers of these small newly hatched fish which abound within a fathom or two of the sea's surface.

PROFESSOR MCINTOSH'S GREAT DISCOVERIES.

Thanks to marine biologists in Norway, Britain, France, Germany, the United States and Italy, a large mass of information is now available regarding the eggs and early life-history of marine fishes; but no researches compare for extent and value, with those of the famous Scottish zoologist, Professor McIntosh, whose investigations have been recognized in all countries for nearly 30 years as the most important and valuable of all. His scientific reports on fish-life in the North sea, were published in the Royal Commission's Report on Trawling, London, 1884. Professor McIntosh's were the first systematic studies actually carried on upon fishing boats and tugs out in the sea, and in experimental tanks at the marine laboratory, St. Andrews, with the object of deciding the spawning habits, nature of the eggs, character of the young, and their migrations in the sea. These studies have been carried on continuously to the present time.

PERSISTENT HABITS OF YOUNG FISH.

The migrations differ somewhat in various species, but their ascent or descent vertically, or their movement from shallow to deep water or *vice versa*, have been proved to be as certain and unchangeable as the seasonal travels of migratory birds. Storms, winds, &c., may delay or even divert them somewhat, but their courses on the whole are fixed and unailing. Thus the young cod' says Professor McIntosh in a recent address,* the green cod, haddock, and whiting, after their earliest (larval) stage, are oblivious of currents in their movements—on the one hand to shallow, and on the other hand to deep water, and the same may be said of the young flat-fishes. There is no reason to believe that the hardy adults are affected by temperatures, currents, or salinity in a greater degree, except in so far as storms may sweep into bays greater quantities of food.'

STUDIES ON FLAT FISH (THE PLAICE).

The plaice which is one of the most abundant and valuable of European flat-fishes has usurped a large amount of attention since its eggs were first hatched and its stages of growth to the adult condition studied, and figures drawn at St. Andrews, Scotland. Other younger workers have since then published results, in later reports, but they are singularly at variance. 'Dr. Bolan, the German experimenter' as is pointed out in

*Two lectures 'Scientific Work in Sea Fisheries, Royal Inst., London, May, 1907.

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the Royal Institution lectures already referred to,* differs from Dr. Garstang, the former stating that plaice leave the coasts in summer and autumn, and return in spring, whereas the latter gives spring and summer as the period of migration to the off-shore. Here, then, is considerable variation in the results, and neither agrees with the condition at St. Andrews. Many supposed phenomena of migration are found to be outside the regular movements of the fishes referred to, while the alleged scarcity of disappearance of fish, especially in the sea, may be due to defective means of capture, e.g. the beam trawl or an unattractive bait. Certain observers, under the Scottish Fishery Board, reported the disappearance of plaice from their haunts, but as Dr. H. M. Kyle has shown the introduction of a plaice-seine from 1872-1880 in Danish waters troubled the catches in supposed depleted areas. The use of a new bait, viz.: an actinarian or anemone instead of the usual mussel bait, revealed the presence of abundant cod and haddock, which were supposed to have declined. The ordinary bait had lost its power to attract them.

MIGRATIONS OF MARKED FISH INCONCLUSIVE.

Experiments with marked fish in the sea have proved most inconclusive. A far safer guide is the course taken by the practical fisherman, whose living depends upon his captures, and seeks the fish where they are. Marked plaices have been found hundreds of miles from the spot where they were liberated. May it not be that like the 'Rat with the bell' in the old story, or the dog with the kettle tied to its tail, these fish carrying an irritating plate, or wire, or other mark, behaved in an abnormal and misleading manner.* The lobsters set free by the United States' experimenters, on the Massachusetts shores, which wandered over a hundred miles, cannot be taken as proof that the vast hordes of Canadian and United States lobsters perform seasonally such extraordinary journeys.† We know that the shad enters certain eastern streams on our Atlantic coast, evidently coming in from no very distant places in the open sea, yet the shad planted in Oregon were found to have wandered 400, 500 and even 1,000 miles, two specimens being captured, as early as 1895, at Rivers inlet, at least 500 miles from the place of liberation. Many, too, have entered the Fraser river.

LOCAL VARIETIES IMPLY LIMITED MIGRATIONS.

There is abundant evidence that fish have their own resorts, and adhere to their own migratory courses. An experienced salmon fisherman can readily determine from what river a certain salmon has been taken. A Godbout (Labrador) salmon cannot be confused with a Restigouche fish, or the latter identified with a Miramichi or St. John river salmon. All differ in form, build, average, size, &c. Nay, a fish so uniform in size as the sockeye or blueback salmon (*O. nerka*) of the Pacific coast, shows similar local peculiarities. A Rivers inlet sockeye is of larger size, it is claimed, than a Fraser river fish, while the red flesh is paler than that of the sockeye of the Nimpkish river, only 40 or 50 miles away. The Nimpkish salmon average, one important canner said, 16 to a case (48 lbs. weight) though an exceptionally large sockeye was taken in that river, in 1895, for 10½ to 11½ salmon filled a case of canned fish. Further, it is said that in the same river, particular 'runs' make for specified tributaries or upper waters. 'I can tell a Harrison river sockeye,' said a pioneer salmon canner on the Fraser river; yet there are at least seventy-five tributaries of the Fraser river to which

* Lecture II., p. 8, reprinted from the *Zoologist*, 1907.

* In the Lancashire Sea Fisheries Laboratory Report, 1907, p. 128, Mr. J. Johnstone, that in some species the flesh is chafed and a bad wound caused by the marked label.

† Dr. Alex. Meek refers in his report on 'Migrations of Crabs' that from the records it is shown that 'the males may remain in the same region for several years.' *Sci. Invest. Northumb. Sea Fish. Rep.*, 1906.

the salmon schools ascend for spawning purposes. A similar statement may be made in regard to the sea herring, of which the Loch Fyne variety has long been generally recognized. On the great lakes the common whitefish (*Coregonus*) exhibits distinctive differences in each of these vast areas. All these facts go to show how emphatically local a great many species of fish are, and that even so typical a migratory fish as the sea herring is confined to comparatively narrow limits, the schools in each locality, moving in from the deep water and back again to these feeding grounds, without wandering very far from their native area. There are exceptions to which I shall make reference on a later page.

FISH ARE TRUE TO THEIR MIGRATION ROUTES.

Not only have the fishes, in sea and fresh water alike, their own local habitats, but they adhere very strikingly to their own routes in moving over their restricted areas. It is well known that fish-traps and other nets, set in a particular spot, will make large captures, because the schools habitually pass that spot, whereas a net placed close by, but just off the specified route, will make poor captures or even take none at all. It has long been known, on all salmon rivers, that the schools have a very definite course, and while winds and tides, storms and currents, may cause modifications, these changes are subordinate and do not affect the general law. The English Severn, as I have mentioned in previous reports, possesses tributaries which to all appearance are as suitable as any others, yet the salmon never ascend them. It is true of all salmon rivers. Such a river as the Skeena, in northern British Columbia, has comparatively few tributaries (as compared with the Fraser), but the main schools (i.e., the sockeye salmon) adhere to certain tributaries only and will not go up all alike. Indeed, they prefer the upper Babine tributaries, to reach which frightful canyons, terrible rapids, and every kind of deterrent, must be overcome; but the nearer easier tributaries cannot tempt them to enter. The immense armies of Fraser river salmon, moving along the Juan de Fuca straits, will not turn aside, though numerous suitable and more accessible spawning ground occur on Vancouver island, such as those up Clayoquot sound, &c. As a prominent Clayoquot salmon packer said of the small schools which passed his locality: 'I thought that these fish were on their way to the Fraser and that we only got a wing of these schools that swung into our sound, but the longer I stay there, the more I am convinced that they are peculiar to their localities. They seem to run regularly, and the big (Fraser) run does not affect them, which I think would be the noticeable feature if they were in any way connected with the Fraser river run.* Not only is this the case, but the salmon on reaching the upper waters, when a fork occurs in the tributary up which they are moving, will unfailingly select one fork or branch, season after season. In the Nicola valley there is a salmon stream which divides into two owing to an island in midstream, and across the left channel a barricade was built for lumbering purposes. The salmon could not surmount the barricade, but they would not ascend the right or open channel. The local Indians said: 'The salmon know their way and that right channel is not their channel.' The bands of Indians above could not get their food supplies of salmon and complained bitterly. Certainly in large estuaries like the Bay of Chaleurs, the salmon moving into the famous Restigouche river prefer the southern or New Brunswick shore, and the salmon nets on the Quebec or north side are therefore few, and their catches have always been smaller than on the opposite shore.

MIGRATIONS NOT ALWAYS AT SPAWNING TIME.

While fish, as a rule, move in large schools as spawning time approaches† and anadromous species move into rivers yet there are regular migrations, which have not

*At intervals every fourth year is the popular view, the Sockeye Salmon run in exceptional abundance up the Fraser river.

†There are exceptions. The Caspian herring, *Cleupea Kesslere*, Dr. Kousnetzoff, says 'remonte individuellement, et non par bancs, le haut Volga, &c.' Rep. Int. Congress Fisheries, Paris, 1900, p. 111.

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this purpose. The smelt, for example, is a spring spawner and in March or April deposits its eggs in brackish water near the mouths of rivers and in estuaries, but, in such a river as the Miramichi, immense schools of smelt enter the river in November and December. At that time enormous catches are made through the ice. Indeed the greatest catches of the year are then secured. So far as known there is no particular food at that time to attract them in, and they are not approaching the spawning condition, which is attained four or five months later. Schools of sturgeon migrating from the sea have been similarly observed, long before their spawning period. Fraser river fishermen claimed that they came in after the smelt, in February, and fed upon them as voraciously as the Labrador cod feed upon the smelt-like capelin (*Mallotus*) when these small fish approach the shore for spawning purposes. This early run of sturgeon was in February, 1895; but the great runs of these fish were in the fall in August, and later, when drift nets were used in the night at 'slack water.' Ten or twelve years ago I saw large runs of half-grown pike (*Esox*) passing up small streams in the northern Saskatchewan district, northwest of Canada. They were so numerous that I procured a number by striking them at random with a long pole, and they proved a welcome addition to our camp fare. The descent of eels, in large schools, down rivers is now understood, since it has been proved that these fish spawn in the sea. The young eels $3\frac{1}{2}$ or 4 inches long ascend in spring some weeks after they have hatched out.

UTILITARIAN THEORY INAPPLICABLE.

Now, while there is ground for the view that winds, currents and tides, and possibly temperature, salinity, &c., may affect the movements of fishes, there is no question that the cause of these migrations is more profound. Nor is it sufficient to say that it is of advantage to the fish to move, that they may escape enemies and other dangers, and that on the principle of the survival of the fittest, the kinds of fish that have adopted the migratory habit have survived, while those succumbed that did not do so. If this be true of the shad or the salmon why is it not true of the eel, whose young are hatched out in the deep sea, in the midst of those dangers which it is alleged the shad and salmon escape by being hatched in fresh-water, more or less distant from the sea? The newly hatched herring mounting to the surface of the sea and moving shorewards later 'to form' as Professor McIntosh says 'a carpet on the sandy bays, still maintains its amazing plenitude, while the migratory river herring known as the gaspereau or alewife, having acquired the habit of ascending the rivers to escape the sea's dangers, at the time of spawning, has decreased, and in some Canadian rivers has become almost extinct.

The real reason which prompts fish to migrate from deep water to shallow, or from the sea to remote fresh waters, or like the catadromous eel to descend to the sea for breeding purposes, must be sought in less obvious explanations than mere safety, or more favourable physical and biological conditions.

PAST SUBSIDENCE OF SEA IMPORTANT.

The researches of Dr. Oskar Grimm on the fishes of the Caspian sea no doubt furnish the key to the problem. There are five or six species of herrings in the sea. Moreover, Dr. J. D. Kousnetzoff states the herring in these seas, now no longer continuous, ascend their respective streams at the proper season to spawn. During the rest of the year they remain in deeper water, where food is abundant. 'La plus grande partie de l'année le hareng reste dans les profondeurs de la mer Caspienne,' says Dr. Kousnetzoff, "car il s'y trouve une abondante nourriture dans la masse des êtres vivants, commençant par les crustacés et finissant par le menu, *Athernia caspia*, Eichw.

RIVER BASINS ONCE PART OF SEA.

It seems clear that the salmon, shad, alewife and other migratory sea fish, still resort to the regions (the upper waters and chosen spawning sites) to which their ancestors resorted, when these regions still formed part of the sea. As the land was elevated, and the more remote river basins were cut off, excepting by the narrow communications called river, the fish retained their hereditary tendency. This tendency, often called instinct, is so strong that all the endless obstacles to accomplishing the migration cannot deter them. Rocky canyons, rushing rapids and falls, landslides filling up river channels, predatory birds and aquatic mammals, fishermen civilized and savage, bears, foxes, seals and all manner of enemies make war upon them. Man erects dams and barriers or pollutes the waters with factory refuse, but the hereditary instinct is too strong to be crushed down.

HARDSHIPS OF MIGRATING SALMON.

The fish take no food, they become emaciated, warm, and injured, and multitudes die on their long journeys, sometimes 1,000 miles or more from the sea. 'The salmon,' said Dr. Turlington H. Bean, 'would have been better off, it appears, had it never been born in fresh water, where its dangers are cumulative and deadly.' In the sea it is plump, silvery, and free from disease, the areas open to its wanderings are illimitable, it has abundant room to flee from its enemies, and man has sought in vain to net or capture them in the open ocean. Yet so uncontrollable is the migratory tendency, hereditarily implanted, that it must perforce move shorewards, seek the mouth of its chosen river, having gained which it ceases to feed, deteriorates, becomes diseased and quarrelsome, and even dies under the harsh conditions of its sojourn in fresh water.

NUMBERS OF SALMON DIE.

In all salmon rivers a proportion of parent fish die from wounds or exhaustion—in some Scottish rivers a considerable number do so; but the opinion has been expressed that in British Columbia, and Pacific salmon rivers generally, no adult salmon survive the migration from the sea; a statement which is without doubt, extreme. There is proof that not all die, and the late Dominion Fisheries Inspector, Thomas Mowat, stated his view (in 1892) that about 25 per cent of the British Columbia salmon runs return to the sea, and the statement is doubtless not far removed from the fact.

LAND-LOCKED VARIETIES OF SEA FISH.

The salmon is certainly a sea-fish, like the shad and gaspereau, and its spawning sites, now far removed from the sea, were once part of the ocean; but have, as stated, been cut off. To reach these ancestral spawning grounds the salmon must migrate; but its return to the sea is not absolutely essential. There are indeed, land-locked salmon. In Scandinavia, Russia, United States, and Quebec and New Brunswick (in Canada) salmon are found which do not migrate to the sea. They might do so in some cases, as in the cases of the Chamcook lakes in New Brunswick, but do not do so. The land-locked salmon of Lake St. John, Quebec, can descend to the sea, but could not return if they did so. Whether now cut off by geographical conditions or not, the hereditary instinct has been lost, just as the domesticated duck has lost its migratory instinct. Such instincts or tendencies are difficult to eradicate, and the hunting, especially the bird-catching tendency of the cat-tribe, is still strongly retained by the domestic cat in spite of its ten thousand years of association with man.*

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I have elsewhere dealt with the possible modes in which land-locked varieties of sea-fish may have originated. Hence the occurrence of smelt in Loch Lomond, New Brunswick, can be understood, or even their occurrence in lakes in the Gatineau region, far removed from the sea (600 or 700 miles). Hake (*Nerluccius*) are known to take to a fresh-water life, and one Gadoid, the Burbot or fresh-water Ling (*Lota*) is purely a fresh-water species, and occurs in the most remote lakes of northwest Canada, as well as the great lakes and connected waters. 'Fishes are not so sensitive to changes of temperature, to change in salinity, or to other phenomena, as supposed; neither do they dread currents. Professor McIntosh recently pointed out: 'The salmon, the sturgeon, and the eel are at home both in the sea and fresh water, and the flounder, the mullet, the sea-perch, the sprat, and the sparling, take little notice of varying salinities. The Baltic herring can readily be acclimatized to fresh water, even to the extent of being killed, if by accident it suddenly falls into sea water.

HEREDITY IS THE CAUSE

The migratory instinct is an old, hereditary and deeply implanted tendency, and the surprise is, not that it is retained so strongly in the salmon and similar fish; but that it is ever lost. Just as the migration of birds cannot be fully or satisfactorily explained on grounds of utility, or of intelligent observation and ratiocination, yet is so wonderful that a pair of swallows will leave their nest, migrate across France and the Mediterranean to Algiers, and in the following spring will return, not only to the British islands, or the same parts of those islands; but to the very barn or house, where their old nest is still to be found. The 'homing' powers of pigeons and of cats, indeed, all the phenomena of animal migration are to be traced to heredity, and in the case of fishes, can be explained as set forth in this report.

SOME FISHES POSSIBLY NON-MIGRATORY.

There are some fishes which do not, so far as our present knowledge goes, show this pre-determined and fixed character. Such fishes appear to be neither true to an established route of migration, now confined in their movements within local and limited bounds. The sharks and dog-fishes in the sea are erratic and uncertain they resemble the wolves, which may infest a district for a time, destroy the deer, and then move to other regions. Hordes of dog-fish, and schools of sharks, seem to have the same erratic hunting instinct. In fresh-water the carp, introduced into Canada twenty or thirty years ago, and the native cat-fishes, appear to have no settled migrations, or fixed geographical bounds. Like the house-sparrow (*Passer domesticus*) they wander everywhere, and make themselves at home everywhere. More accurate studies may show that even the carp has local and regular migratory movements. We know that the whale tribe, long regarded as the wandering monsters of the deep, have habitual courses, and move with great regularity along 'beats which the whalers discover without difficulty. The eel is one of the few catadromous fishes known. It descends to salt water to spawn, though in remote inland waters as in Canada, it may, like the abundant fish-water gadoid, the burbot or river ling, spawn in fresh water. That remains to be discovered; but the eel, it must be remarked, is a highly specialized and much modified fish, and its habits afford no light upon the general laws of fish migration.

* Cats are found in the tombs of their owners in Egypt embalmed, indeed mummy cats are of common occurrence dating back 10,000 or 12,000 years at least.

SUMMARY.

The importance of the facts dealt with have a direct and vital bearing on fishery legislation, and the difficult problems of appropriate and effective fishery regulations. If valuable food fishes are restricted and local in their habitats and in their movements; if they are controlled by rigid hereditary instincts, that fact will dictate in many ways, the kind of protective measures which will best preserve the fish. The points may be briefly stated as follows:—

1. Young fish in their first stages have a vertical and, later, a horizontal distributory migration.

2. Maturing and adult fish move from deep into shallow water, and do not wander widely, while anadromous species are true to their routes, return to their own rivers, and even return to particular tributaries or spawning sites.

3. Fish schools also migrate when not seeking spawning grounds and probably not in search of food.

4. Heredity affords the best explanation of the remarkable phenomena of fish migration.

5. The existence of local varieties (salmon, herring, &c.) proves that these typical migratory fish do not traverse vast distances, or scatter fortuitously.

6. Few fish are erratic, and such form notable exceptions to the general rule, that migrations are regular, geographically restricted, and under the potent stimulus of heredity.

II

UNUTILIZED FISHERY PRODUCTS IN CANADA.

By PROFESSOR E. E. PRINCE, COMMISSIONER OF FISHERIES FOR CANADA, OTTAWA.

The utilization of waste products is one of the most remarkable features of the manufacturing world to-day. The fisheries have been an exception, almost the sole exception among the great industries of the world, and little has been done to turn to account the waste materials and by-products yielded by the fish business. The flesh or muscular tissues of fish and in a few instances the liver, are almost the only portions that are, speaking in general terms, made of commercial value. The head, fins, tail, skin, bones or skeleton, entrails, and various internal parts are usually thrown away and wasted. The amount of offal or 'gurry' and other waste materials produced at great centres of the fishing industries is astounding. But apart from these by-products, which are unutilized, though the waste is fully recognized, there are also vast quantities of materials of value going to waste and unutilized because no one recognizes their value, and few realize that they exist.

It is true that at intervals some venturesome authority announces to the world that sources of wealth are being ignored, and many cases might be instanced of schemes of utilization which are absurd and impossible. The public and governments have been repeatedly led astray through the mistakes or the ignorance of persons, not possessed of adequate practical and scientific knowledge to see the impracticable nature of their schemes. To the ordinary observer, indeed, they may appear feasible, and commendable.

A science which aroused much attention a few years ago referred to the utilization of lake herring. It was thought by persons not properly informed that a cured or pickled herring industry might be created on the Great lakes of Canada, and just as Scottish cured herring were in demand, at very remunerative prices in United States markets, so Ontario cured herring could be similarly supplied to these markets. The fatal objection, of course is this, that there are no herring in the Great lakes, which can be cured by the Scottish method. The so-called lake herring are not herring at all. They do not belong to the Clupeidæ or herring family; but are really 'lesser whitefish' and belong to the salmon and trout family, which are utterly unfitted for curing in the way suggested. The bones are too few in these lesser whitefish to make a compact salt-cured fish, the flesh is flanky and unsuitable, the flavour is inappropriate, and barrels of such fish shipped to the markets would entail loss upon the shippers. The whole scheme was Quixotic and impracticable.

Every one knows the wonderful story of the utilization of coal-tar products. These were formerly regarded as waste and valueless; but the ingenuity of the late Professor Grace Calvert, of Manchester, England, showed that valuable dye-matters (aniline dyes) could be extracted from the gas-tar. Later, odours or scents, and the most delicate and exquisite flavours, those used especially in confections and sweet-meats, were extracted. Later still, glycerine, vaseline, and numerous oleagenous products were obtained until the waste by-product, the valueless coal-tar has become one of the most valuable materials in modern industrial enterprise. Other cases might be instanced; but it is in the field of fisheries that products of great value exist which have not yet been turned to account.

That in important fishing centres where wealth, intelligence, and enterprise abound, there should continue, year after year, the most extensive waste of materials

containing products of importance and value is truly astonishing. The fisheries, indeed, offer a promising arena for investigation in this regard, and this report is intended to direct attention to some of the unutilized materials which are available for utilization in Canada.

HOW PRODUCTS ARE WASTED.

There are three principal ways in which fishery resources of value are going to waste or rather are not being utilized so as to bring adequate returns. First there are products which are being thrown away and got rid of as useless which are of value if properly handled; second, there are products which are being so badly utilized as to bring the smallest returns possible; third, there are products which are not neglected and not recognized as included in our fishery resources at all. There is of course danger in the attempt to place on the market a new product and human ingenuity may devise methods of turning out fish for food which are reprehensible.

REPREHENSIBLE METHODS OF UTILIZATION.

Thus it is well known that for many years past quantities of so-called smoked whitefish and smoked salmon sold in Chicago were not smoked fish, and had never undergone that wholesome method of preservation. These whitefish, probably deteriorated by being kept too long, were chemically treated and coloured by means of aniline dyes so as to resemble in colour the smoked whitefish which is so much in demand. Salmon, too, had been treated in the same way, and the method not only resulted in fish resembling the smoked product in colour, but there was no loss in weight, as there always is during the genuine smoking or semi-cooking process. In January last year the officials on one occasion seized five tons of salmon in Chicago, which had undergone no process of smoking whatever, yet in colour and to some extent in odour they were a good imitation of smoked salmon. A well known United States journal thus referred to the seizure of a quantity of these fish: 'Assistant City Chemist Francis J. Seiter has been analyzing the seizures, and he says that the fish are not only coloured to give them a nice appearance but that it is done because smoking fish reduces the weight while dye adds to it, therefore making a greater profit for the dealer, and a corresponding loss for the consumer. "One hundred pounds of fish which is treated by being smoked will weigh but sixty pounds, after the process has been gone through with," said the assistant city chemist. "If the fish is dyed the loss will be but a few pounds. All of the fluid in the fish is preserved and therefore a big loss in weight is saved. The manufacturers of aniline dye guarantee that 100 pounds of fish treated with dye will not lose more than 20 pounds to the hundred. The loss in weight is always much less than this."'

A good deal has been said, during the last year or two, about the canning of dyed carp and other artificially coloured fish, and their sale in the markets as Pacific salmon. The best markets, such as the London market, to which Canadian canned salmon has always been mainly shipped, cannot be deceived, and will not buy or handle these false products where, however, there is an overwhelming population usually on the verge of extreme poverty, there is a sale of such goods; but the good repute of Canadian fish will not permit of the encouragement of these nefarious methods. Our fish packers and dealers must, in their own interest, put only the best food products on the market and thus maintain the reputation and ensure the demand for Canadian fish. Six or seven years ago there was an outcry against certain shipments of fish from eastern Canadian ports, to Porto Rico, and there was actually a protest issued by the Porto Rican Board of Health in 1901 against such fish. 'On many occasions large quantities of cod-fish have been condemned as unfit for use. All the samples,' the board stated, 'were poor in quality and much of it of such low grade that it could not be sold at any price.' The resident British consul forwarded the representations, and

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while it must be admitted that there has been carelessness in cleaning and curing many catches of cod and other fish in the Maritime provinces, it is also true that no cured codfish in the world can compare with the Canadian catch on the whole. It certainly compares well with the American catches on the same banks, and our methods are not inferior to theirs. The trouble in Porto Rico, it was hinted, arose from a desire on the part of United States shippers to bring Canadian fish into disfavour, and leave the field open to themselves alone. A similar prejudice was created in Europe regarding canned lobsters, which were reported to be of poor quality, whereas the United States lobsters were graded as of high quality. Parisian and London buyers were frequently impressed by this claim of United States superiority, whereas almost the whole of the United States shipments of lobsters are Canadian lobsters, caught in Canada, and packed here, and shipped to Europe via United States ports through American middlemen and agents.

BEST PRODUCTS ESSENTIAL.

While the above is true, it remains no less imperative that those, who put up and handle fish products in Canada, must maintain a high standard and thus secure, as was the case for many years with British Columbia, canned salmon, a better price than that paid for United States and other canned salmon. Fifteen years ago I personally called the attention of prominent curers and merchants in Halifax, N.S., to the absolute necessity of avoiding carelessness in gutting and cleaning fish, and in preventing their undue exposure to the sun, when on the vessels and wharfs. I so reported to the Minister of Marine and Fisheries at the time, and have my report now before me; but one curer to whom I objected that there was too much 'blood' remaining below the backbone, near the shoulders, gave me the reply that the 'negroes of the West Indies preferred strong smelling fish.' The so-called blood is really the decayed kidneys, dark red organs, which are most offensive when they become putrid.

The quality then of our present fish products must be maintained and improved whenever possible.

KNOWN NEGLECTED RESOURCES.

Before referring to industries that can be created by utilizing products not recognized as food products at all by fishermen, I may, in passing, refer to the long neglect of fisheries, of which our people were well aware; but to which they were indifferent. Thus clams which abounded on our Atlantic shores, and eels which ascended in countless millions up our eastern rivers from the sea and grew in fresh water to large dimensions, were for a long period wholly neglected. On the Pacific coast the neglect was even more extraordinary. When delivering an address in the rooms of the Vancouver Board of Trade in 1895, I first called attention to these neglected resources, and the matter was emphasized in certain articles in a Vancouver newspaper from which I culled the following:—

FISH OTHER THAN SALMON.

'Two promising developments have marked the fishing industry. One was that the export of fresh fish has been established and with a success that indicates permanency. The other is that sudden attention has been bestowed in the curing of fish and the prospect of securing a market has presented itself. To write a chapter on the fish of British Columbia which would do justice to the subject, would make it too long for the purpose of this article, but to omit all reference to it would be presenting Hamlet with Hamlet left out.

Briefly, without giving scientific nomenclature, the fish most abundant in the coast waters are: Salmon, of which there are about six varieties, not including salmon

trout (*Salmon purpuratus*) which some authorities alleged to be the true salmon and not our salmon of commerce; cod, of which there are several varieties, exclusive of the whiting and 'skil' which belong to the *Gadus* family; halibut, or giant sole, very abundant in northern waters and of great size and fine quality; herring, smelts, sardines, sea bass, flounders, soles (wrongly so called locally), and oulachons. All these are fish of commercial value. A few others, such as Tommy cods, grey lugs and capelin, are offered very rarely. The fresh waters inland contain in great abundance trout, sturgeon, land-locked salmon and species of whitefish. The sturgeon grows to an enormous size, sometimes caught weighing 1,000 lbs. The cod banks of British Columbia have evidently not been definitely located as yet, for while the young cod come into the bays and inlets in large quantities, the parent fish is not caught in sufficient numbers to warrant the belief that his peculiar habitat has been discovered, though it has been fairly well in Alaskan waters.

For four or five years back there has been a conviction in the minds of many that the export of fresh fish to the large centres would pay, and that it would ultimately assume large proportions, but numerous ventures and experiments were made without success, and it seemed as though British Columbia was too far from the market to promote any trade of importance. However, last year several carloads of fresh salmon and halibut were sent to New York, and while the venture did not meet with any great financial success, the result justified further attempts in the same line and this year they have been followed up somewhat energetically. It is the intention of several companies engaged in it to continue shipments throughout the year. Trial shipments of fresh fish, principally salmon, were made to China and Japan, Australia and England, regular shipments being continued by the Alaskan steamers.'

There need never be difficulty in disposing of fish products, for there are many countries, which have practically no fish of their own, to which Canadian shipments could be sent if once a systematic scheme were decided upon and properly launched. Four or five years ago Mr. E. E. Sheppard, who had been Canadian Trade Commissioner in Central America, called attention in an address in Toronto to the curious fact that while Canada, with its rich and varied fisheries had practically no fish trade with South America generally, yet Germany, which was not a fish-raising or fish producing country, sold large quantities of fish, in various forms, to South America.' A prominent Toronto journal, in a leading article, attempted to deal with the reasons, which appear mainly to be indifference and lack of enterprise, though it remarked regarding Canada that 'the Dominion, probably the greatest fish raising country in the world, sold comparatively nothing in the way of fish to those countries. It is quite likely that the lack of means of conveyance has something to do with the conditions so far as Canada is concerned which Mr. Sheppard points out.'

Happily there has been a change during recent years; but South America still offers a great field for fish business.

FOREIGN FISH PRODUCTS INSTRUCTIVE.

Nations like the Norwegians and Japanese have always utilized a vast number of fish products which we ignore. The fact that Canadian waters have produced in unparalleled abundance the most superior kinds of fish, salmon-trout, whitefish, pike, perch, sturgeon, &c., in the inland lakes and rivers, and cod, mackerel, haddock, smelt, herring, lobsters, oysters, &c., in our seas, amply accounts for our indifference to other fish products which are viewed as inferior. In Mediterranean countries, Italy, Spain, Greece, &c., the fish markets abound in edible marine products, which no Canadian ever thinks of eating. The Chinese, Japanese, and our native Indian tribes regard as luxuries many fish and other produce of the waters, which we view as beneath contempt. Just as the Scotch reject shrimps, prawns and eels from their list of table delicacies, while the English regard them as dainties, so the French

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esteem the crayfish and certain mollusks, which are not on the Briton's usual bill of fare. A Halifax correspondent, two or three years ago, gave the details in a local paper, and said of his experience at Japanese dinner tables:—

‘Other articles which I have eaten in a single full course are fish, soup, fried fish, baked fish, fried eels and rice, pickled eggs of sea urchins, dry octopus or squid, boiled abalone, sea weed jelly and shredded whale cartilage pickled.’

THE CARP.

I have in a previous report dealt very fully with the carp question,* but as chairman of a special fisheries commission, which has been taking evidence, during the last two years, along the waters of western Ontario, I have been once more impressed with the serious nature of the ‘Carp Question’ in Canada. It is true the fishermen generally view the matter with less alarm for, at certain times of the year the carp are in demand in United States markets, and bring remunerative prices, especially as the fish increase in numbers very fast and grow rapidly to a large size; but carp will never be a popular article of diet in Canada unless put up in some appetising form. The fishermen themselves, who capture carp, confess that they do not eat these fish, they much prefer good whitefish, lake herring and pickerel or doré. When smoked the German carp acquires a dainty flavour, and a tempting appearance. It appears that a large new industry could be created with a little enterprise by sending these fish into the market. The carp are split open, cleaned, sliced into long thick strips and soaked in salt and water for about twelve hours. The brine should not be too strong, a little experience enables the curer to judge of the right quantity. The salted or pickled strips are then placed in a smoke-house or smoking receptacle, laid out on a frame over a smoky fire. Maple chips, corn cobs or other agreeable smelling combustible materials may be used for the fire, and by placing the frame on which the fish is spread 18 to 24 inches from the fire, the heat and smoke partly cooks and smokes the fish at the same time. Care must be taken that the fish do not acquire a disagreeable black colour, as in the case of some sample shipments of smoked carp sent to the Buffalo markets the black colour was objected to. If the fish are properly smoked there is no objection to the adoption of an artificial yellowish brown dye, or stain such as burnt-sugar fluid, which will give them a more appetising colour. Smoked sturgeon is regarded by epicures as one of the finest of edible fish products, and smoked carp has been declared by experienced Ontario fishermen as equal to sturgeon so prepared. There is no doubt that smoked carp would bring a much better price than ordinary fresh carp, the price of which during a part of the year is very low.

IMPROVED MEANS OF UTILIZATION URGENT.

There are many fish, which by a slight process of curing can be made to yield far larger returns than when sold fresh. Had Scotland shipped all herring in a fresh or slightly salted (semi-cured) condition to Germany, Russia, or other countries, to be there converted into other food products, there would never have been built up the great Scottish herring industry of to-day—one of the most profitable and important fishing industries in the world. On the Atlantic coast, Canada ships, in a fresh condition, vast quantities of half-grown herring (called sardines) to the so-called sardine canneries in the State of Maine. The value in 1905 was nearly \$700,000; but had these fish been manufactured and packed in Canada the value would have been about ten times as much.† Canning on a small scale is now proceeding in New Brunswick, the

* The place of carp in fish culture. Supp. I., 29th Annual Fisheries Report, Ottawa, 1897.

† The value of this U. S. sardine industry ranges from \$5,000,000 to \$7,000,000 per annum.

value in 1904 being \$32,000 (for a pack of 694,200 cans); but in the future this industry, involving the employment of a large amount of labour, the building of machinery, making of cans, &c., will no doubt develop on our own shores just as the lobster canneries have grown on the same eastern shores to be a vast industry.

CURED VERSUS FRESH HERRING INDUSTRY.*

A similar loss of business has continued for many years on the Pacific coast. British Columbia firms have exported in a fresh or semi-fresh (slightly salted) condition, immense quantities of fine herring to the State of Washington to be utilized there either in kippering or as bait or as fertilizer.

This export of herring as raw material brings the poorest returns, and the province of British Columbia would receive one hundredfold returns were these herring cured, or kippered, or canned in the Dominion, or sold as bait direct to the fishing boats at Canadian ports. As United States citizens have been mainly active in encouraging in British Columbia, and carrying on under the auspices of British Columbia firms this herring export, the greater interests of the province were not, of course, recognized; but the limitation of this inferior and less remunerative traffic is the main means for cultivating a profitable and important British Columbia industry comparable to that of Scotland. The Scottish herring curing experiment, carried out at Nanaimo by the Dominion government, in accordance with my recommendation, has proved that British Columbia herring can be converted into a cured product not less valuable than the esteemed Scottish herring. Several important British Columbia firms have already built sheds and wharfs, and commenced Scottish herring curing operations, with every possibility of large developments in the future.

A Victoria newspaper in 1906 emphasized this great possibility, and called attention to the growth of a canned herring industry on the Fraser river, the supplies of fresh fish being obtained at Nanaimo:—

‘The Windsor cannery of New Westminster is taking daily consignments of several tons to the Royal City, where they are being canned and shipped to the eastern market. So great are the orders for fish besieging local establishments that it has been found necessary to put on a night shift, and while a very large force is working in these establishments there is a standing advertisement in the local papers for assistants in preparing the fish for market. Judging from the present outlook, the fishing industry here promises to develop in importance subordinate only to mines.

Yet while this utilization in Canada of fish caught in Canadian waters was thus being energetically started and developed, a serious leakage was at the same time going on, on an extensive scale, viz., the shipping of vast quantities of fresh herring, or very slightly, but not really cured fish, to Seattle and Tacoma, to build up a rival curing industry just across the line, thus competing with our infant industry, with a view to its destruction. I quote again from the same journal:—

‘The herring industry in Nanaimo is now in full swing. The fish are running in a constant stream as never before witnessed this season and the curing establishments are working 24 hours a day with a large staff filling orders that have been on file for months back. There are now no less than three steamers making semi-weekly trips to Seattle and Tacoma with fresh herring. The *Ranger*, *McCullough* and *Squid* are the vessels employed, each of which carry from seventy to a hundred tons a trip. Captain Fulton of the steamer *McCulloch*, which cleared yesterday for Seattle, loaded to the water line, says that an enormous market for local consumption is being built up in Seattle. Now that Seattle people are being introduced to the delicacy of Nanaimo herring, the demand is growing steadily. From other parts of the state of Washington

* The late A. R. Milne, C.M.G., customs collector, Victoria, B.C., said in 1895: ‘There is not a systematic herring fishery in the whole Pacific coast, yet the Sandwich islands want them.’

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orders are also coming in for Nanaimo fish, so that this avenue of the herring industry is proving a profitable one for those engaged in it. Just now, Seattle dealers are placing Nanaimo fish in cold storage so as to be in a position to handle outside orders.'

ONTARIO PICKLED HERRING IMPOSSIBLE.

As all experts are aware, there are limitations to the curing and canning of fish. All fish cannot be satisfactorily cured or canned, and many mistaken projects have been urged by persons lacking in knowledge and experience. Thus, the scheme set forth in Ontario four or five years ago that a Scottish herring industry could be created on the great lakes was most absurd, for two reasons:— (1) The so-called lake herring are really lesser whitefish, and will not stand curing in the way the herring will, with its very numerous bones holding the flesh well together. (2) The trade would refuse to accept as herring an unsuitable pickled fish such as the small species of whitefish, miscalled by all the fishermen, lake-herring. For the same reason, viz.: the nature of the flesh and bones, the smelt cannot be satisfactorily packed in tins. The smelt, like the so-called lake herring and the whitefish are salmonoids, and have more of the nature of the salmon and trout than the herring or sardine, hence experiments tried in New Brunswick were not satisfactory. On opening a can of smelts the meat was found to have fallen from the bones and had a dry 'jumbled' appearance and far less appetising than the compact neat-looking sardines, though the flavour was excellent. The delicious candle-fish or oulachon of the Pacific coast, like the smelt, is not suitable for canning, though the United Empire Salmon Company, with ample capital proposed to experiment in the northern British Columbia rivers in putting up canned oulachons. The best method of pickling and preserving in kegs though if nicely put up in long narrow bottles in vinegar or other preserving fluid, they might be a success in the markets. As the flesh adheres loosely to the backbone it falls off in 'chunks' when cooked and canned.

TUNNY INDUSTRY IMPOSSIBLE.

No one acquainted with the great Tunny fishery of the Mediterranean, or familiar with the flesh of that fine fish when placed on the table, can doubt that, if the large specimens of the Tunny (*Thynnus thynnus*) caught every season on our Atlantic coast could be preserved and marketed, a demand would spring up for it. Its importance in France is next to the sardine, as M. Pierre Lemy, a preserved food merchant in Paris said, 'Après la sardine le thon (tunny) est, en France, le poisson qui est-l'objet de la fabrication la plus importante dans le genre d'industrie dont nous occupons ici. La majeure partie du thon pêché dans le golfe de Gascogne est capturé par des pêcheurs bretons ou vendéens qui ramènent leur poisson dans les ports où existent des usines de sardines, sûrs qu'ils sont d'y trouver l'écoulement de leur butin. La plupart des usines de sardines fabriquent, en effet, du thon conservé.' —(Paris Exhib., 1900, Memoires, Congrès International d'Agriculture et de Pêche, p. 358).

The mode of putting up the flesh of the tunny may be briefly stated:—The fresh fish deprived of the head, tail, fins, and entrails, is cut into large pieces and boiled in salt and water. After thus being cooked, the pieces are dried in chambers through which passes a strong current of air through numerous openings. The dried portions are cut down to appropriate sizes, placed in cans, covered with olive oil, sealed hermetically, and boiled in retorts like sardines. The tunny being allied to the mackerel, has a good flavour and is in high favour where its qualities are recognized. They are called mackerel sharks in mistake, also horse-mackerel, in Canada, and excepting that the Gaspé residents have been accustomed to salt a few in barrels at times they have been usually thrown away and wasted when captured by the fishermen. I have

seen them rotting on the beach at Yarmouth, N.S., and in Gaspé basin, P.Q. Smoked tunny, and bonito, really a smaller species of tunny, are popular in Japan. As Sir Frederick Nicholson says, it is an excellent product,' economical in use, and will keep good for years.' The same authority informs us that the fish after being opened and boned is cut into longitudinal strips, boiled or steamed, dried on trays in the open air and then smoked over a slow-combustion furnace which burns various woods and sawdust. A dozen or more trays are piled up so that the smoke penetrates the various tiers, and colours them a dark brown, after which the fish is given a final drying in the open air or in a drier at 70° to 90° F.

SKATE, SHARK, DOG-FISH, SHARK'S FINS, &C.

Skate, sharks and dog-fish are abundant, too abundant, the fishermen think, in Canadian seas; but they have been little utilized. I dealt fully with certain phases of this matter in my former report on 'The Dog-fish Pest in Canada,'* and since then the Dominion Government have attempted in three different localities. Ship-pigan, N.B.; Canso, N.S., and Mud island, N.S., to utilize these fish, particularly dog-fish for fertilizer and oil. In my report I referred to the edible qualities of the dog-fish family, and on recent visits to Boston I found in that fastidious city that some prominent fish-dealers' stores exhibited choice cuts of a firm white fish labelled 'ocean whitefish,' which was no other than the dog-fish (*Acanthias*) of our waters. It was regarded as very good by those customers who had tried it. The central part of what is called the 'wings,' i.e., the large breast fins of the skate are regarded even in England as a delicacy by epicures, and skates' 'wings' find ready sale. The Chinese have always held sharks' fins, &c., in esteem. In the *Norsk Fiskeritidende*, February, 1907, pp. 50-55, is a short article on these dried fins, and the Chinese and Japanese markets with an illustration on page 51, showing how the fins require to be neatly cut off at the base and hung, after being salted, to dry. Of eight species of sharks and dog-fishes generally utilized, four at least occur, or almost identical species occur, in Canada, viz.: *Carcharias*, *Alopias*, *Lamna*, and *Mustelus*. The dried fins are sold by the picul (133½ lbs.) i.e., about 16½ piculs to the English or 'long' ton. The price varies according to quality, but may be as much as 50 cents per pound (\$70 to \$80 per picul). They are largely handled by Messrs. Aagaard, Thoresen and Co., Hong Kong, British China, and there is no limit to the market. India, especially the Madras Presidency has largely exported shark's fins to China. Shark and dog-fish paste is also a commodity in demand, especially in Japan. The flesh removed from the boxes is pounded into a paste, a little salt being added, and it is made into rolls, like rolls of butter, which are steamed for nearly half an hour. These rolls of a lard-like appearance will keep for several days, even in hot weather, and it is in general use. The flesh of sharks and dog-fish has long been a staple article of diet in New Zealand and the Southern Pacific islands, and if these fish, captured in Canadian waters, could be supplied to natives, a considerable demand could be created. The Maoris capture the fish by means of baited hooks.

Fresh mullet is the one bait a shark finds irresistible and will always bite at, but where this is not to be had a very good substitute, and a bait sharks take is the large six-inch mussel, which is to be found in numbers on the submerged sand-banks of the coast.

Great quantities of these shell-fish are collected in readiness ere the season commences, and being placed in heaps on the beach.

But before commencing fishing operations a large loosely woven flax receptacle, containing the pelt and offal of some slaughtered animal, a bullock or a sheep is hung

* 'The Dog-fish Pest in Canada.' Special Report, Mar. and Fish. Report (Fisheries), 1903.

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over the boat, the blood and savour of it filtering through render the sharks perfectly ravenous. Dozens of them flock around the floating bag, making ineffectual snaps at it as the man holding the line jerks the tempting morsel from their jaws. In the clear water every motion of the fish can be watched, and their rushes at the bag avoided.

The baited hooks are suspended near the bag and considerable catches are made, especially of which are called ground sharks.

Blue-shark, shovel-nose, and hammer-heads are all caught in numbers by the natives, and all are found equally good eating.

None of these species, however, attain a size of over twelve or fourteen feet in length; indeed, the average run of size is from six to eight feet. The flesh of the larger fish is said to be too coarse and strong-flavoured, and the fishermen accordingly discard anything over ten feet long.

The carcasses after being cleaned, are hung in the sun to dry upon transverse poles supported by uprights 20 feet high, and in three or four weeks they are cured, and dry as wood. They are then packed in flax mats and transported in bales to the various native villages. Dried shark has ranked high as an article of food amongst these Pacific natives. The smaller sharks or dog-fishes and their allies, the skates and rays, are, however, better adapted for table use in civilized countries, being superior in texture, colour and flavour, and if properly cleaned, the entrails and skin carefully removed, and the flesh prepared in small 'chunks,' there is no reason why it should not become a general fish food, like the once despised flounders and flat-fishes, the sea cats and frog-fishes, which now readily find sale in the best European fish markets.

ROE OF FISHES.

The eggs or roe of fishes is chemically a nutritious material and caviare, or the prepared roe of the sturgeon is one of the most esteemed and expensive of fish products. The public indeed have made such a demand, especially in the United States, for certain fish containing well developed roes, that the price of fish like roe shad, in Fulton Market, New York, last season, sold at 35 cents each, while shad not containing roe brought 15 cents. At Boston and New York restaurants the cooked roe of a shad costs 75 cents to the retail customer. But roes of fish other than sturgeon or shad have a value as food, though so generally wasted and thrown away with the entrails, as gurry on the great lakes, splendid caviare has been made of the roes of suckers, pickerel or dore, and other fish, by enterprising fish merchants. Such caviare if coloured with some harmless dye should rapidly become a recognized and profitable commodity. The most important demand, in many respects, for fish roes is, however, for use as a lure or bait for attracting and collecting the wandering sardine schools. Just as 'pummy' proved effective in the mackerel fishery off the Atlantic shores, so preserved 'roe' or 'rogue' is valuable in the sardine netting operations. Norway has a most remunerative 'rogue' industry, and Newfoundland has provided a good deal though on account of poor packing it is sought less eagerly than the Norse cod roes. The United States also produces this article. The well-developed eggs of the cod, haddock, mackerel, hake, pollock, &c., are best for the purpose. The roes are carefully removed entire, salted and packed tightly in barrels. They are repacked later in barrels through which holes have been bored one-quarter inch in diameter. The brine escapes through the holes and the roe is preserved in a dry condition. Dr. Hugh M. Smith, in a most interesting report (United States Fishery Bureau Bull., 1901), gave the details of the industry, and points out that the eggs must be separable, that is, well formed, the salting must be carried out while the egg mass is fresh, being placed in layers of dry, rather fine, salt, and after the first packing, should be repacked, graded according to quality or state of ripeness, and finally packed in barrels holding 308 to 316 pounds weight. Loose eggs or broken roes must be packed separately.

There have been spasmodic attempts to supply the demand for 'rogue' or cod's roes cured in a way suitable for the European sardine fishery, and amongst many references in official reports, I quote the following from a Dominion fishery officer's report about twenty years ago, in which reference is made to the preparation of cods roes on the Gaspé coast:—

'Cod is a delicious fish, and one in which there is no loss. It supplies human food, oil and a kind of glue which is as much prized as that of a sturgeon. Large profits are also realized from the sale of cod roes. The preparation of this article, which yields a large revenue to Newfoundland fishermen, was until lately comparatively unknown to our people; but I notice with pleasure that more attention has been paid to this branch of industry than usual. Four or five years ago the Gaspé people began the preparation of cod roes for export, but, for reasons unknown, the trade was dropped. Having plenty of time on hand this season, they again set to work, and the statistics show that on the coast of Gaspé no less than 622 barrels of cod roes were prepared, giving a revenue of over \$4,000. Newfoundlanders export this article to Norway and France, where it is used as bait for sardine fishing, and sells from \$5 to \$8 a barrel.

'Codfishing on our shores is divided into two seasons: summer and fall fishing. Formerly, the only fish that were dried and went to the merchants were those caught after August 15. The fish caught after that date were salted and sent to Montreal or Quebec in barrels, or were traded for the purchase of winter provisions. But now that almost everywhere in Gaspé, and especially in the western part, the system of engagements is changed, there is so to speak but one season fishing, the summer fishery; since all the fish caught is dried for export.

'Although cod is met with on the whole coast of Gaspé, there are several places where it is found in greater abundance than others, such for instance as Percé and the neighbourhood of Bonaventure island and of Cape Gaspé. In these places also the fish remains a greater length of time than at others.'

Along the Mediterranean, in Japan, China and other eastern countries, the large masses of eggs, orange coloured or reddish, which are contained in the sea-urchins or prickly sea eggs, abundant on our Atlantic and Pacific shores, are sold in the markets as food. They are esteemed as highly as oysters, and as sea-urchins are so very plentiful, they might be turned to account if pickled and shipped in jars, like jam, to the countries where sea-urchin's eggs are an article of diet.

The suggestion has been made that the eggs of dog-fishes and skates, which are obtained in great numbers when these fish are being captured and utilized, might be made of some use. When the dog-fish are being handled at the Government Fish Reduction Works, these eggs (like the large eggs of birds removed from their shells) may cover the wharfs to a depth of several inches. They are most excellent and nutritious food. In my former report on the Dog-fish, I mentioned their use in Scandinavia in the making up of puddings, and recently an eminent English chemist, Dr. T. E. Thorpe, in an official report to the Cornwall County Council, emphatically states that:—

'The eggs of the dog-fish, when boiled, are very similar to an ordinary hard-boiled hen's egg, and a wholesome and highly-nutritious food.'

THE SEA-CUCUMBER OR TREPANG.

The trepang is an esteemed article of food in China. It is really the dried sea-cucumber—a large kind of sea slug or echinoderm*—often 12 to 15 inches or more in length and 3 or 4 inches in diameter. These creatures abound on the Atlantic and Pacific coasts of Canada, and may be taken with ease by means of a dredge; yet, so far as I am aware, this abundant food product has never been turned to any

* Often called 'beche-de-mer.'

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account by our people. Their preparation is very simple, and when dried they sell in Canton for \$45 or \$50 per ton. It would cost little to gather them, and as they would find a ready and lucrative sale amongst the Chinese and especially, if shipped to China, that it is surprising no firm has ever entered into the business.

The late Judge Swan, who noticed the abundance of sea-cucumbers or holothurians on the coasts of Vancouver island and Queen Charlotte islands showed some specimens to several Chinamen, who at once declared them to be the best quality of 'whetong,' one of the Chinese names for trepang. The trepang, when prepared for market, is an ugly looking, brown-coloured substance, very hard and rigid, and can be eaten only after being softened by water and a lengthened process of cooking, when it is reduced to a sort of thick soup by the Chinese, who are very fond of it; and when cooked by a Chinaman who understands the art, it makes an excellent dish.

The preparation of the trepang for market is simple. They are to be boiled in water, either salt or fresh, for about twenty minutes, and then slit open, cleaned, and dried. Those dried in the open air or sunshine bring a higher price than those dried over a wood fire, which later is the usual process adopted by the Malays. Some varieties require boiling for only a few minutes, or till they become firm to the touch. They must be dried thoroughly, as they absorb moisture readily, and are then liable to become mouldy and spoil.

Europeans who have tried trepang report that it is very good, and if the trepangs after being gutted are boiled in a decoction of 'artemesia' it is said to be preferable to the salt cure. They should be spread on a bam-boo frame and dried in the sun. New Caledonia, the Pacific isles, Malay, the Ladrões and the New Hebrides supply great quantities; but when dredging in Southern New Brunswick, and in various regions in British Columbia, the dredge was often difficult to haul up on account of the mass of writhing, slimy, sea-cucumbers gathered in the bag.

ABALONE AND OTHER MOLLUSKS.

The abalone, which occurs in the northern waters of Vancouver island, and off Queen Charlotte islands, is valuable both as food and for its beautiful pearly shell.

The massive fleshy body of the abalone or ear-shell (*Haliotis*) is salted, boiled and dried, and is in great demand in China. It is often slightly smoked, while the shell is used in the manufacture of buttons and for ornamental purposes. A long spear may be used in fishing for it from an open boat, though the Japanese fishermen in California and in British Columbia obtain it by diving. A water glass for searching the rocky haunts of this shell-fish is usually brought into requisition. Sir F. A. Nicholson refers to a fishery on the Madras coast and states that the shells alone exported to England during the ten years, 1890-1900 realized nearly \$13,000.

Quite a number of shell-fish could be turned to commercial account in Canada, British Columbia alone producing 16 or 18 different kinds, of which only two or three are utilized. The razor-clam has come into demand in many American cities; but the demand for these shell-fish boiled and dried is enormous in China. Extensive cultivation of these shell-fish is now carried on in Japan.

The pecten or scallop is an esteemed shellfish, which in Canada has largely gone to waste, although used to a small extent for bait. A recent writer, describing the scallop dredging industry of Long island and the method of marketing them, says that in the opening of the clam shells and removal of the flesh, the children of the fishermen are mainly employed. 'A small boy or girl will open a gallon of scallops in one hour and ten minutes, and receives from twenty-five to thirty cents per gallon, according to the size of the shell, large fish filling a measure much quicker than small ones. An expert adult will open two gallons an hour. As it takes two bushels of scallops to yield a gallon, an enormous amount of shells has to be handled. The emptied shells are thrown in piles outside each house.

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The average catch for each boat is thirty-five bushels a day, but when scallops are plentiful a boatload has been known to disgorge one hundred bushels. A large percentage of those taken are seed scallops, and there is need of reform in this respect. They are better for eating after they have spawned, and as the average number of eggs laid by a seed scallop is one hundred thousand, each one destroyed, though only twenty per cent of those spawned might live, means a loss to the industry the following season.

'After being opened the scallops are thrown into water to soak until time for shipment, and here is a "trick of the trade" not generally known. Soaking scallops in water causes them to swell, and in this way a shipper can increase the bulk of his shipment nearly half. Five gallons freshly opened will increase to seven gallons by this process; and it is rumoured that they are sometimes soaked over again by retail fish dealers. This soaking process whitens them, but it takes away their sweetness and fills them with water to such an extent that frying them crisp and brown is almost an impossibility.'

The pecten or scallop, like the cockle and the mussel, is a tough attractive bait, as well as an esteemed table delicacy a portion of which may be prepared like stewed oysters, or served as a soup of the richest and most appetizing character. Great beds of pectens exist, though not generally known, on both our Atlantic and Pacific coasts. They have hitherto been practically unutilized.

NEW BAIT RESOURCES.

Cockles and mussels are of marked value in most countries. Boiled and dried, the Chinese regard them as a delicacy, but cockles are now coming into demand in United States cities and amongst Canadians. There is no more dainty or delicate food. Vast areas on the Atlantic and Pacific shores, could be made to yield quantities of mussels, and in view of the great demand in Scotland for these shell-fish for bait purposes, it might be remunerative to ship them to the British islands, where they have sold for \$5 to \$10 per ton in the shell. Holland exports immense quantities to London and to Scotland, and it is a most profitable business. At St. Andrews, in New Brunswick, the extensive sand flats there are yielding remunerative catches of cockles. The St. Andrews *Beacon* some months ago said:—

'The cockle business is assuming quite respectable proportions in this locality. This season (1906) a number of men found lucrative employment in gathering these shellfish from the beaches, the local price being 45 cents per bucket. The largest exporters say their shipments this season will total up over 2,400 buckets, and they have many orders that they will be unable to fill, owing to scarcity of men. The cockles are shipped direct to the haddocking fleet at various points on the New England coast. They are used entirely by the handliners. Linefish like cod and pollock are very fond of this bait, while the dogfish have no liking for it. In using it the fisherman breaks the shell off and then pounds the meat into a pulp, otherwise it will harden and choke the hook. Each fisherman is provided with a hammer and a small piece of flat iron (the latter being set in the vessel's rail) for this purpose. The demand for this kind of bait is steadily on the increase. It is worthy of remark that this is the only locality west of Portsmouth, Mass., where cockles can be found in paying quantities.'

Other bait products are whelks, anemones and lampreys. The last-named fish abound in certain Canadian rivers and lakes. The Dutch fishermen have long found the lamprey cut into pieces, a most durable and successful bait, and the Thames fishermen sell about \$4,000 worth per annum to the Dutch fishermen for that purpose. They have bought from the Thames fishermen \$3,000 to \$4,000 worth, while the Yorkshire fishermen, at Scarboro and Whitby find lampreys one of the best baits for turbot. New baits are often found to vastly increase the catches in long-line, or 'trawl-line' fishing. Lampreys are also said to be a good food; but their use will probably never be general on the table. They might, if tried, prove most effective in sea fish-

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ing, and possibly hand-line fishing and in sturgeon fishing in fresh waters. A change of bait has frequently most unexpected results. Professor McIntosh has said: 'Careful observations . . . have demonstrated that in their season, and by the use of anemones for bait, and then of gill-nets, cod (said to be so rare) can be caught in hundreds by a single boat.* Again, the same authority refers to the 'substitution of anemones for mussels, of cuttle-fishes or squid for herrings, of lobworms for scallops, and of the alternation of gill-nets with tempting bait of various kinds. Few appreciate the revelations made by such changes of method.'†

SEA-WEEDS AND MARINE VEGETATION.

'Sea-weeds,' wrote Mr. P. L. Simmonds, 'are used directly for manure, for the manufacture of soda, iodine, bromine, and some like Irish moss for the manufacture of *gelose*. Dried, they are used for ornamental purposes. In many northern European countries, sea-weed is used in winter for feeding horses, cattle and sheep, and it is eaten by deer when other food is scarce. Last year United States Consul Rasmussen, of Stavanger, referring to the handsome returns brought by the sea-weed harvest in Southwest Norway, who calcined it and sold the ashes to British agents, pointed out the valuable chemical products yielded, including iodine, and added, this remarkable statement:—

'As a source of income, adds the consul, sea-weed has in a very few years surpassed fishing and agriculture in fortune building. Old debts have been paid off, and land that was formerly unproductive has been drained and filled.'

Of course the amount of iodine is said to vary in the sea-weeds from the different coasts; but whether these plants on the Canadian coasts are rich or poor in iodine can be decided only by tests. In Britain and France, where iodine manufacture is an old industry, the amount of iodine produced by a ton of kelp (kelp is the weed burnt into hard, dark coloured masses or cakes) is 10 lbs., and 20 tons of fresh wet weed makes a ton of kelp, Simmonds stated that 400,000 tons of sea-weed were necessary to yield the annual production of iodine in Britain.

Mr. Rasmussen has afforded much detailed information upon the Norwegian sea-weed industry, and the following may be quoted:—

'The annual income (in Norway) from sea-weed ashes amounts to about \$107,200, but it can be doubled. Every fisherman knows the difference between *alga* and *tang*. Only the former can be used as raw material for the iodine and chloriodic industry: *tang* is entirely worthless. But of the different kinds of *alga*, it is immaterial, or nearly so, whether one makes use of the large, strong stalks or the broad-leaved kind; when the weed is carefully handled, one can secure an excellent product. If *tang* is burned with *alga* the value is decreased considerably, and all such wares should be refused. It is defrauding the purchasers, who might as well buy wood or coal ashes as those burned from *tang*. This has not been clear to the producers, which is only natural when it is remembered that there has not hitherto been produced sufficient ashes to supply the demand, and the product, therefore, has been partly bought without criticism by the manufacturers.

Besides being mixed with '*tang*,' the ashes are often found to be adulterated by sand and stone. *Alga* ashes are also of little value when decayed or rotten weed is used or when the weed has been too long exposed to rain before dried, or when the fire is extinguished by salt water. The best product is obtained, as a rule, from the cut weed, but weed that is washed ashore is often very good, especially early in the year—say, in April and May.

The weed must be fresh dried and burned on rocky ground. Should it rain the weed must be gathered in a heap and covered. Along with the dry weed must be

* Scientific Work in the Sea Fisheries, London, 1907, I., p. 11.

† Id. II., p. 3.

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placed some that is damp, to prevent the fire from breaking through, so that no more air is admitted than necessary to promote the carbonization. The burning should take place on rocky ground, so that the ashes will not become polluted with sand and gravel.

We strongly recommend sea-weed burning and careful handling of the product, because our country cannot afford to lose any of its industries. Now that the Japanese have also entered this field, the price of iodine in November, 1905, fell from 29.65 kroner to 16.95 kroner per kilo (\$3.61 to \$2.06 per pound). What difference the price of the prepared article has on the maintenance of this industry one can understand.

The price is governed by several factors. What we can do is to produce good and sufficient raw material for the benefit of our maritime population and our manufacturers by careful handling of the weed. As an example of how necessary it is and how the question of success or failure is dependent on the quality of the raw materials, it can be mentioned that of two competing manufacturers in this country in the production of the same amount of goods, one used 420 tons of ashes, at a cost of \$13,060; the other used 286 tons, at a cost of \$8,040. This difference of \$5,020 in cost of manufacture represents a direct loss for Norwegian industry, and therewith for our nation; loss caused by carelessness and want of judgment. If the struggle for maintaining Norwegian and Scotch industries stands face to face with Japan—and it will come, and come soon—the best chances for success lie with the factory producing the most economically.

One of the most prolific fields for the growth of sea-weed is at Joderen, on the southwest coast of Norway, where it appears as veritable forests of trees from five to six feet in height, with stems as thick as ropes and as tough as leather. The weed sprouts in summer and gradually covers the ocean bed with a dense brush. In the fall the roots release their suctionlike grip on the rock bottom and great quantities float ashore, forming a sea wall many miles along the beach. The fall crop is good only for fertilizer, and is used as such by the natives; but in spring what drifts in is successfully gathered, dried and burned, and during this season thousands of the farmers who own strips of the coast line make thousands of bonfires, some burning as much as 3,000 kilos a year. This is one of the natural resources of Norway about which little was known 20 years ago. During the summer many train loads are sent to Stavanger, whence two or three cargoes a week are shipped to Great Britain. Subsequent use and treatment are to some extent scientific secrets, although the kelp ash is known to be largely used in the making of iodine. The fact that the industry is profitable is shown by the willingness of the English agents to pay a good price, and many of the Norwegian farmers have become rich by selling it. Modern machinery, in the shape of mowers, hayrakes and harrows, have replaced the primitive farm implements in use a few years ago.

In order to keep their Glasgow, Scotland, plant fully occupied, the British Chemical Company, of Clydebank, are encouraging the revival of the kelp industry in the outer Hebrides. Encouraged by the success which has attended their efforts in Tiree, North and South Uist, Benbecula and Barra during the past three years, the company has extended its operations to Lewis and Harris. Nearly £3,000 were distributed in the Island of Tiree alone last season, and considerably more to kelp makers in the other islands mentioned.

The amount of exertion involved in gathering and burning the tangles is light and the average family can earn £1 per day. If a sufficient quantity can be obtained from the Hebrides the company will not continue to get an additional supply from Norway and Ireland.

The common bladder wrack, *Fucus vesiculosus*, is said to yield more saline and earthly matters than most seaweeds, and Pereira found in it nearly 20 per cent of common salt, 12 per cent of potash, the same of soda of lime and nearly 25 per cent of sulphuric acid. A ton of weed yielding 320 pounds of ash would afford 2½ pounds of

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phosphates, iron and lime, $5\frac{1}{2}$ pounds of potash, and other mineral matters, totalling up to over 23 pounds of valuable saline products. Again, as vegetable food many weeds are valuable. The Irish moss (*Chondrus crispus*) is nutritive and emollient and furnishes a jelly valuable in lung complaints. It is dried, bleached by five or six separate exposures to the sun and alternative washings, until it is yellowish white, when it is stored, packed in barrels and shipped to the buyers, which include cooks (for puddings, blanc-manges, &c.), brewers (for clarifying beers), calico printers, paper makers, felt and straw hat manufacturers, &c. Hingham, Mass., U.S.A., at one time shipped large quantities of this so-called sea moss. Dulse (*Scherzysmenia edulis*, Grev.) sold in a semi-fresh condition is in great demand in seaport towns and also inland, and is often eaten with butter and fish, or boiled in milk with rye flour.

Vast quantities of weed are exported to China from Japan and other countries, where it is used as a substitute for dried fish, or as a vegetable, to thicken soups.

The tubular stalklike portions of the large tangle weeds are long used by British Columbia Indians as oil bottles for the storage of oulachon grease, a method of utilizing the hollow rounded proximal part of the plant which the New Zealanders and the Polynesians generally adopted. The most remarkable use of the dense somewhat rubberlike stalks is that of their conversion into form of preserved fruit. Lemon peel, orange peel, and citron, have long been used in the boiled, candied form, but the tubular fleshy stalks of the huge laminarian seaweeds have been prepared in the same manner. After the extraction of the sea water and salt, the stalks, cut into pieces of suitable size, are boiled in sugar, and prepared in an appetizing way so that in appearance, flavour, texture, indeed, in all the essential qualities, this 'candied seaweed' is equal to and almost undistinguishable from candied or preserved citron. As a food it is no doubt more nutritious and beneficial than citron, and if the preparation of this seaweed in Washington State, U.S.A., prospers, a great Pacific industry may be developed. Thousands of tons of raw material are going to waste on the British Columbia coast for the giant tangle may range there from 15 to 30 feet in length. Simmonds says that 'Upholsterers and others use seaweeds for stuffing couches, stools, &c., in which they too frequently are substituted for horse-hair. They are used to stuff mattresses, especially for children, because the aromatic odour keeps away insects. Packers use them for wrapping fragile objects.' The same authority refers to the barnacle weed (*Zostera marina*) used for stuffing beds and chairs in France and England, being known as *crin vegetal* in the former country and 'alva' in the latter country. In 1873, Granville, France, exported over 4,000,000 pounds of this dried weed. The annual value was over \$10,000. On the south shore of the St. Lawrence there has for many years existed a similar industry, great quantities of the *Zostera*, or herbe à barnache, or 'Pherbe à outarde,' are annually harvested, especially below low water mark, where scythes are used to cut it under water, from boats. Along the shore of Kamouraska, Rimouski, and along the coast of Cacouna, Isle Verte and Trois Pistoles, this rooted goose-grass or barnacle grass grows abundantly. It is thrown up between tide marks after storms, and the long slender fronds may be 5 to 12 or 15 feet in length. Considerable shipments are sent by rail to United States mattress makers, and the residents make profitable returns. A similar dried weed industry could be created along a large part of the Atlantic coast where this weed grows abundantly.*

CORALLINES AND SO-CALLED WEEDS.

Amongst the materials cast up by the sea on flat beaches, beautiful feathery bunches of what are called seaweeds are abundant. They often have a coralline appearance and are much harder in texture than most true weeds. They are not indeed weeds or plants at all, but colonies of minute animals. These colonies may be slender

* It is estimated that the value of this industry at Isle Verte alone ranges from \$10,000 to \$30,000 per annum. (See Inspector Belliveau's Report, Fisheries Report, 1905, p. 81.)

and feathery, or fat and leaflike, but they have a crisp and somewhat velvety feel. In the Channel islands and on certain small islands in the South of England, these so-called weeds more correctly called Hydroids or Zoophyte colonies, are gathered for commercial purposes. On the Isle of Grain it is said that 20 to 30 tons are gathered by the local people between October and the end of March. It is in demand for trimming hats, and quite a demand has been created for it. It is gathered on the sea beach, shells and other matters removed, and after being picked over it sells for about \$250 per ton, London being the principal market. A recent writer says of this little known industry:—

‘The “weed,” as it is known locally, is not cultivated in any way, but drifts ashore and is picked up upon the beach and foreshore at low tide. Exactly where it comes from does not seem to have been definitely ascertained. Some of the inhabitants are of the opinion that it grows in the deep waters of the North Sea, and others think that its native place is in the shallow waters of the Thames estuary. Be that as it may, the Island of Grain is the only part of the coast upon which it comes ashore in marketable quantities.

‘Harvesting the weed provides a precarious and uncertain employment for practically the whole poorer class population of the island. Each gathers for him or herself independently, and disposes of the result to dealers, who in turn forward it to London and foreign houses. A northerly gale brings most seaweed ashore and a single gleaner has been known to pick up half a hundredweight in a morning. At other times, when the wind is in the wrong direction, none will come in for days. The present market price of the partially dried sea-weed, from which all rubbish has been removed, is about sixpence per pound. It must be remembered, however, that the weed is extremely light and feathery, so that a pound, when dried and prepared for use, represents a considerable bulk, and, in the ordinary course, much labour in picking.

‘Queen Alexandra, whose antipathy to the ruthless destruction of birds for the sake of their plumage is so well known, has done much to bring sea-weed back into popular favour as an adornment for hats by recently purchasing a quantity for that purpose. When skilfully blended and artistically arranged in combination with artificial flowers, the fairy sprays of this slender and charming sea-weed are capable of producing exceptionally fine effects. In fact, hats so trimmed form quite a feature of some of the famous West End establishments at the present time, and bid fair to become increasingly popular in the near future. The scope of sea-weed for decorative purposes is, however, by no means confined to millinery. It can be purchased in a variety of shades at a moderate figure from most large drapery establishments, and will be found most useful for table and room decorations generally. Great care must be exercised if it is to be used near candles or other naked lights, as the dressing used to preserve its fluffy appearance sometimes renders it highly inflammable.’

On the Atlantic and Pacific shores of Canada these beautiful and delicate zoophyte fronds are found in abundance and wonderful variety. The utilization of materials so easily gathered and capable of being turned to such ornamental and profitable account, must surely occupy the attention of some enterprising pioneer.

EEL SKIN INDUSTRY.

Of all unlikely products any form of leather from a skin or integument so thin and elastic as the skin of eels would appear the most improbable. Yet for many years, in a quite street near the famous London Bridge, an eel-skin factory has carried on a paying business. There are prepared and manufactured various articles from the integument of the river eel.

The skins are manipulated by numerous complicated processes until they resemble and would easily be taken for leather, although of a more gelatinous and

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pliable nature. This strange commodity is cut into long thin strips and pleated very closely together for whip lashes and to cover portions of the handles of more expensive whips. Certain kinds of lashes and harness laces are also made of eelskin.

The leather is almost indispensable in articles of this description, where flexibility, allied with an uncommon toughness, is desired.

GLUE, ISINGLASS, ETC.

It is strange that with an abundance of raw materials there has never developed in Canada a successful fish glue business. Properly carried on, with sufficient technical knowledge, it is a most profitable industry. Fish skins all contain more or less glue of great value. Great business firms like Messrs. Marcus Ward & Co., in Ireland, use weekly many tons of fish-glue; and the demand is enormous. Cements for crockery &c., like 'seccotine,' are used in every household. Codfish skins, hake, &c., could be got in illimitable quantities, while the sharks and dog-fishes are also a source of glutinous materials. Isinglass is a refined and special form of glue made from the swim-bladder and certain internal membranes, especially of sturgeon, cod, hake, &c. These materials have been wasted, excepting by far-seeing United States buyers, who have bought dried sounds of such fish as the sturgeon and turned them into the valuable commercial product referred to—yielding profits of not less than 10,000 per cent. Other fish yield isinglass, indeed last year the Canadian newspapers announced that at Digby in Nova Scotia certain United States firms were inquiring for the raw 'isinglass' material, stating that:—

'The isinglass factories of Gloucester, Mass., are ordering large quantities of hake sounds from those dealers who make it their business to cure that commodity. Shipments are going forward quite freely via Yarmouth.'

The pickerel or wall-eyed pike, the river cat-fishes, the drum-fish, and certain sea-snappers yield the membrane or air-bladder from which glue and isinglass is extracted by soaking and pressure. As a recent authority rightly observes:—

'Glue manufacture provides an outlet for the profitable use of much waste in dressing dried codfish. This material was formerly discarded as useless, but now tens of thousands dollars' worth of choicest glue for postage stamps, court plaster, adhesive paper, labels, envelopes, for mechanical purposes and for sizing of straw goods and textile fabrics, and likewise office and domestic mucilage are manufactured from fish skins. The product is very much stronger and more durable than glue made from the skins of mammals.

'Isinglass made from the sounds or swimming bladders of sturgeon, hake, cod, squeteague, &c., is used for clarifying fermented liquors, the cellular construction forming a sort of net which carries down floating particles.'

In Japan sea-weeds of the genera *Gelidium* and *Globopectis* are used for glue, and for imparting lustre and stiffness to textile fabrics, and glue products of this kind could be prepared in Canada.

SHELL, BUTTON AND PEARL INDUSTRIES.

Many years ago my attention was called by Professor Mavor, of the University of Toronto, to the value of shell, such as the large fresh water clam shells, which abound in the lakes and rivers of Ontario, Manitoba and the west. Many of these shells (*Unio*, *Anadonta*, &c.), are probably too thin usually for profitable utilization, but there are great supplies of suitable shells going to waste, which could be turned to profitable account. The importance of shell products in the United States is apparent from Mr. C. H. Stevenson's statement that 'nearly, if not quite, 1,000,000 tons are secured annually in the United States, consisting principally of the shells of oysters, clams, river mussels and a very much smaller quantity of other varieties. A

fair valuation of these at the places of consumption would doubtless amount to \$1,500,000; to this should be added about \$600,000 as the value of pearls secured during the last year in the Mississippi Valley and elsewhere. The value of the shells secured outside of the United States, principally mother-of-pearl shells, amounts to \$5,000,000 or \$6,000,000 annually, and the pearls secured sell for nearly an equal amount. Pearls are not secured in the seas in such large quantities as formerly, but their value is greatly increased. The manufacture of mother-of-pearl and sweet-water shell in the form of buttons, buckles, knife-handles, pistol stocks, &c., gives employment to nearly 10,000 persons in this country, and to probably three times that number in Europe and elsewhere.'

'The shell trade,' said Mr. Simmons thirty years ago, 'is growing year by year into greater importance, and there is ample scope yet for its extension with profit and advantage, alike to the fisherman, the merchant and importer, to the manufacturer and vendor, and to the general public who are purchasers. Leaving out of account the cuttle shell or cuttle fish bone which is obtained from certain species of squid and is used by bird fanciers on account of its calcareous properties, the shells and shell substances found in seas and rivers may be classified as follows:—

- (1) Shells suitable for white and pearl buttons.
- (2) Shells used for ornamenting jewel cases, fancy boxes, and pearly or iridescent in appearance.
- (3) Shells used for knife handles, spoons, lamps, pipes, &c.
- (4) Shells adapted for cameo carving, bracelets and jewellery.
- (5) Shells which can be converted into an enamel for pottery glazing.
- (6) Shells used purely as ornaments when polished or as money amongst primitive tribes.

In Canada our shell resources have been left almost unexploited while certain waters in the United States owing to the demands for their shell products have been almost denuded. One authority of prominence in Iowa has sounded recently a warning note. According to the *New York Fishing Gazette*, February 23, 1907, this authority 'is seeking to get fish commission experts or other qualified experts of the government to make a study of how best to propagate and distribute these mussels or clams. He believes in this way some means can be found to perpetuate the supply and save the industry.

'Census figures show that in 1905 the value of the fresh water pearl button made in the United States was nearly \$5,000,000. Of this amount New York was accredited with \$1,813,167, while Iowa had \$1,500,949. Iowa had fifty-one factories, while New York only had twenty-six.'

The abalone or ear-shell industry is one capable of development, for beds of these beautiful shells occur at known points in British Columbia, and many undiscovered beds doubtless exist. London imports from Japan from 75 to 100 tons of these ear-shells (*Haliotis*), while in California a valuable business has long existed. The following notice of this industry may be quoted, having reference particularly to the fishery on Terminal island, California:—

'When the season is at its height twelve to fifteen tons of abalone are handled each week. They are taken from the shell, the intestines removed, and the muscles boiled for canning and shipped to many points, or dried by steam preparatory to the use of the Japanese, Chinese and other Orientals.

'When the fish are removed the shells are saved. If imperfect, they are stowed away to be ground up for poultry food or for fertilizer. If perfect they are turned over to the California Pearl Manufacturing Company and from them are made some of the most beautiful ornaments that could be imagined.

'Some are polished in their entirety and are sent to the curio and shell stores by the thousand. Many are shaped for brooches, belt pints, cuff buttons, ear-rings, &c., and in their changeable rainbow hues, varying with each angle at which the light strikes them, form most beautiful and attractive novelties. Others are shaped for

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settings for jewellery and large quantities are mounted in sterling silver for jewellers all over the country.

'The process of treatment is very interesting. First, the rough exterior is ground on the carborundum wheels. Next they are polished on the cloth wheel and later shaped for whatever purpose is desired.

'The market for these products is ever widening. They are sold from Maine to Tampa and from coast to coast. It is a beautiful product and seems destined to increasing popularity.'

The mother of pearl material when coarsely pulverized is used for ornamental decoration, especially letters in decorative sign painting.

In fishing shell-fish for the various purposes referred to the fisherman has always before him the possibility of finding pearls or gems of value.* Not only the true mother of pearl shell, such as the Meleagrina or so-called pearl oyster of Ceylon; but numerous other shell-fish yield pearls, the Chinese river mussel being well-known in this respect. The fresh water mussels, the sea-oyster, the West Indian strombus, the giant Tridacna, and many others produce pearls, while in the streams of Britain, especially Scotland, pearls have long been sought in the river clams or mussels; but our Canadian lakes and rivers abound in shell-fish, which are known to produce these valuable gems. Some of our remote waters have recently acquired fame on this account. The Chicago *Examiner* said, a few months ago:—

'PEARL FISHERY IN CANADIAN WILDS.

'In the mighty streams flowing through Ungava, Canada, a profitable pearl industry is carried on among the Indians and Eskimos, says the Chicago *Examiner*. Barrenness and desolation, rocky shores beaten by an icy sea, long winters and short inclement summers are the chief characteristics of that northern land. Signs of human life are scarce there, but at intervals may be seen rude huts of rocks erected by whale and seal hunters long since departed for more profitable fields. In the rushing waters of the streams, which empty into the sea, pearls are found hidden in the shells of the mussels, which are often so plentiful as to partially block the river. Unlike the pearls of Ceylon, they are snowy white, but nevertheless of the finest quality, although a certain percentage are irregular in shape.

At the present time several hundred men are engaged in systematically hunting for the pearls. They collect the mussels and pile them in heaps, where they are left until decomposed and then the pearls are easily extracted from the shells. Several large jewellery houses send travellers on periodical visits to buy these pearls, and, of course, the Hudson Bay Company's traders get a fair share of the gems.'

It is impossible in this place to deal in detail with such branches of a shell-fish industry as the pearl business, or the utilization of the shells themselves; but it may be pointed out that empty shells have a value in oyster culture. They form the best 'cultch' or rough flour on which oysters can be planted for breeding purposes. Quite good returns are secured from the empty shells, which are useless for buttons or other purposes. Scallop shells are in demand and they bring rarely less than 6 cents per bushel.

PRAWNS, CRAYFISH, ETC.

In the future the utilization of shrimps, prawns, and other crustaceans will no doubt be carried out on an extensive scale. They are abundant on the Atlantic and Pacific coasts, and on the latter coast, our Canadian waters abound in a variety of exceptionally fine edible species. A limited prawn and shrimp fishery is pursued;

* It was announced recently in the press that a pearl obtained in the Micami River, Ohio, sold for \$2,800 this season.

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but the development of a canning industry would enable these dainty 'shell-fish' to be sent to markets all over the Dominion. In Florida and in California canned shrimps and prawns form an important article of trade.

The incredibly abundant supplies of lobsters on the Atlantic coast of Canada rendered unimportant the creation of a shrimp or prawn fishery; and they still form an unutilized fishery resource.

In our fresh waters there occur numerous species of small fresh-water lobsters or cray-fish, often erroneously called 'craw-fish,' whereas the 'craw-fish' is a very large crustacean found in the sea and resembling a lobster of unusual size, and of a spiny exterior. Few streams or lakes in Canada do not abound in cray-fish; but there has hitherto been little or no demand for them as a marketable product.

Professor E. A. Andrews recently dealt pretty fully with the crayfish question and the possibility of a future crayfish fishery. He says:—

'The demand should increase, with the growth of cosmopolitan populations that appreciate such food as is used in Europe, with the growth of large populations too remote from the sea coast to obtain fresh sea food, and with the increasing inadequacy of the marine crustacea to supply the needs of even those consumers who dwell near the coast. Thus the lobster industry has been strained till the use of young specimens as food to take the place of the exterminated large ones has become very extensive.

'No doubt in time the demand for crayfish will exceed the natural supply and this industry will tend to run the same retrograde course as that of the lobster, oyster, clam and many more important fisheries till the real value of the crayfish as food warrants legislative control and scientific aid such as alone make possible the continuance of more and more of our once "inexhaustible" food supplies.

'Sooner or later the supply of crayfish will need to be made greater. In addition to legislative restrictions and control, three lines of work suggest themselves as suitable for trial when the supply becomes deficient, or, if one is to profit by experience in other fisheries, now, before the supply becomes deficient—first, the artificial breeding of native species in the market region; second, the introduction and propagation of better species than those naturally occurring, and third, the improvement in size and flavour by culture and cross-breeding.

'Experiments in the laboratory have shown the practicability of rearing crayfish artificially. They grew to a length of four inches in three years, and were of marketable size—three inches—at the end of the second year from the egg. The proportion of crayfish reaching maturity was better than might be expected in such cases, and from proper culture large individuals and large races might be obtained.

'The large western Oregon lobster is of rapid growth and grows under artificial conditions to a length of between two and three inches in five months from eggs hatched in the spring. This large species sells for twice the price of the eastern or the southern varieties, and besides its larger size and weight it has the advantage of a more attractive and lobsterlike appearance, so that its introduction into the east should be most acceptable. In fact, the specimens brought here and kept alive in the laboratory were as long as the six-inch "short lobster" now used as food, and if these crayfish were available in quantity they might be used as a substitute for such young lobsters and thus protect the lobster industry.

'The third method of increasing the available food supply—the origination of larger races—may remain for later stages of the industry, but considering the number of species of crayfish in this and other countries, the chances would seem good for some future production of new forms from crossing and selection.

'Apropos of the matter of introducing the Oregon variety into the east, it is interesting to know that a similar thing is going on in Europe. In Germany, France and Switzerland, where the crayfish has been a standard article of food for hundreds of years, the native varieties have been eaten up, and the governments are now stocking the streams and preserves with the American species.'

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In Canada the supplies of crayfish are so great that the main question is not how to improve them in size or quantity, but how to turn to account the abundant supplies which we possess.

A shrimping or prawn industry involving the use in most countries of a peculiar small meshed bag or net pushed or dragged along the sandy or gravelly shores where these creatures live is a danger to more valuable fish. Great quantities of small fish of the best kinds are wastefully killed. The Japanese used an ingenious trap which is most effective and avoids all danger to other fishes. It is really a bamboo cage. At the entrance is a funnel-shaped piece with its smaller end projecting into the interior, so that any shrimp that has once entered it can not again get out. When being used, dozens of these traps are tied to a long rope, and crushed shell-fish (*Corbicula* or *Paludina*) are put within each; then the whole is sunk to the bottom. They are taken out from time to time and the shrimps are secured.

CRAYFISH GASTROLITHS.

Two peculiar button-like stones are formed in the fore part of the stomach of the crayfish during the late summer, according to M. Chantron, about forty days before the shedding of the shell. In old times these gastroliths, or stomach stones, or 'crab's eyes,' as they were called, were held in great repute as a remedy against various disorders, and in China and Japan almost miraculous properties are still attributed to them. They bring a very high price owing to their alleged curative properties. These limy buttons are not to be confused with the hard teeth of the 'gastric mill' or hind masticatory portion of the stomach, and their purpose appears to be to provide calcareous matter for the new shell. After moulting these stonelike buttons are found in the stomach and in three or four days they are dissolved and absorbed, and it is stated that unless they are thus absorbed the crayfish dies in the moulting process. In a large crayfish the gastroliths may be half an inch in diameter, about one-third of an inch in thickness, and are of a smooth chalky substance, chiefly carbonate of lime, with some lime phosphate, a little soda and a proportion of animal matter. Each of these rounded buttons is attached at the side of the stomach in its anterior part. Were a crayfish fishery developed, the collection of these gastroliths in the late summer would be remunerative, as frequent inquiries are made by Japanese agents for information as to where small quantities can be obtained in Canada.

SKINS OF FISHES, WHALES, ETC.

It is impossible in this report to dwell upon the somewhat complex and varied uses of the skins of fishes and aquatic animals. The skins of the porpoise, beluga or white whale and similar sea creatures, can be converted into the finest kinds of leather. The late Campbell McNab, of Portneuf, exhibited extremely fine samples some years ago of beluga leather, which was fine-grained, flexible, unbreakable and most durable. As Mr. C. H. Stevenson, the eminent specialist upon the subject of the utilization of marine resources, has said:—

'Leather is made from the skins of practically all the aquatic animals, and of most of the species of fish, but these rank among novelty or fancy leathers. Seal leather is produced in large quantities. The hide of the beluga, or white whale, is one of the best of all skins for leather purposes on account of its durability, strength and pliability. It is sold as porpoise leather. Tanned walrus hides, especially the thick ones, are in great demand for polishing wheels and other mechanical purposes. Among the aquatic skins used to a less extent for leather purposes may be mentioned sea lion, porpoise, sea elephant and a very large variety of fish skins, especially those of sharks.

The soft elastic skin of the whale and porpoise tribe, rich in gelatine owing to the abundant connective tissue in it, can be pickled as a delicious food. It is one of

the most prized dainties in Greenland and is pronounced excellent by those who have partaken of it.'

ICE MANUFACTURE.

It may not appear very pertinent in a report on fishery products in Canada, which are not utilized, to make any reference to such an industry as the production of ice. There is, however, an appropriateness in introducing here this matter, not only because those engaged in the fishery business use ice very largely; but they are located, as a rule, where the development of an ice manufacturing industry would be easy and profitable. The abundance of ice along our Canadian shores on the Atlantic invites enterprise on the part of fish firms on a more extensive scale than it has hitherto reached. Large cities in the United States, such as New York, Boston, &c., require an almost unlimited supply. There is no duty on ice, and small shippers might find it profitable to ship cargoes late in the winter before warm weather begins, although if shipped in the usual way the cost of freight is too heavy, viz., \$1.50 per ton to New York. Last year and the year before, New Brunswick and Nova Scotia schooners carried single shipments of 150 or 200 up to 500 tons. There is considerable waste (about 40 per cent) under present conditions of transit; but if the United States demand be favourable, there are substantial returns to small shippers who can freight ice at cheap rates on schooners.

CONCLUSION.

In the foregoing notes, which do not pretend to be more than a rapid survey of salient features of this important question, the waste of valuable fish by-products, the production of oil, and the manufacture of fertilizer or manure has been omitted. Two reasons afford an explanation of this omission, viz.: the extent of these questions which is so great that lengthy reports on each would be necessary, and second, the fact that oil and fertilizer industries are already being carried on, perhaps to a very inadequate extent; but on a sufficient scale to show that the value and importance of these waste products are not being ignored in Canada.

APPENDIX No. I.

FISHING BOUNTIES.

The payments made for this service are under the authority of Act 51-54 Vic., cap. 42, intituled: 'An Act to encourage the development of the sea fisheries and the building of fishing vessels,' which provided for the payment of the sum \$160,000 annually, under regulations to be made from time to time by the Governor General in Council.

REGULATIONS.

The regulations governing the payment of fishing bounties are as established by the following Order in Council, dated December 10, 1897:—

Order in Council.

AT THE GOVERNMENT HOUSE AT OTTAWA.

FRIDAY, the 10th day of December, 1897.

Present:

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

His Excellency, in virtue of the provisions of 'The Bounty Act, 1891, 54-55 Victoria, chapter 42, and by and with the advice of the Queen's Privy Council for Canada, is pleased to order that the regulations governing the payment of fishing bounties established by order of the Governor in Council, dated the 24th August, 1894, shall be and the same are hereby rescinded, and the following regulations substituted therefor:—

1. Resident Canadian fishermen who have been engaged in deep sea fishing for fish other than shell-fish, salmon and shad, or fish taken in rivers, or mouths of rivers, for at least three months, and have caught not less than 2,500 pounds of sea-fish shall be entitled to a bounty; provided always, that no bounty shall be paid to men fishing in boats measuring less than 13 feet keel, and not more than 3 men (the owner included), will be allowed as claimants in boats under 20 feet.

2. No bounty shall be paid upon fish caught in trap-nets, pound-nets and weirs, nor upon the fish caught in gill-nets fished by persons who are pursuing other occupations than fishing, and who devote merely an hour or two daily to fishing these nets but are not, as fishermen, steadily engaged in fishing.

3. Only one claim will be allowed in each season, even though the claimant may have fished in two vessels, or in a vessel and a boat, or in two boats.

4. The owners of boats measuring not less than 13 feet keel which have been engaged during a period of not less than three months in deep-sea fishing for fish other than shell-fish, salmon or shad, or fish taken in rivers or mouths of rivers, shall be entitled to a bounty on each such boat.

5. Canadian registered vessels, owned and fitted out in Canada, of 10 tons and upwards (up to 80 tons) which have been exclusively engaged during a period of not less than three months in the catch of sea-fish other than shell-fish, salmon or shad, or fish taken in rivers, or mouths of rivers, shall be entitled to a bounty to be calculated on the registered tonnage which shall be paid to the owner or owners.

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6. The three months during which a vessel must have been engaged in fishing, to be entitled to bounty, shall commence on the day the vessel sails from port on her fishing voyage and end the day she returns to port from said voyage.

7. Owners or masters of vessels intending to fish and claim bounty on their vessel must, before proceeding on a fishing voyage, procure a license from the nearest Collector of Customs or Fishery Overseer, said license to be attached to the claim when sent in for payment.

8. Dates and localities of fishing must be stated in the claim, as well as the quantity and kind of sea-fish caught.

9. Ages of men must be given. Boys under 14 years of age are not eligible as claimants.

10. Claims must be sworn to as true and correct in all their particulars.

11. Claims must be filed on or before November 30 in each year.

12. Officers authorized to receive claims will supply the requisite blanks free of charge, and after certifying the same will transmit them to the Department of Marine and Fisheries.

13. No claim in which an error has been made by the claimant or claimants shall be amended after it has been signed and sworn to as correct.

14. Any person or persons detected making returns that are false or fraudulent in any particular will be debarred from any further participation in the bounty, and be prosecuted according to the utmost rigour of the law.

15. The amount of the bounty to be paid to fishermen and owners of boats and vessels will be fixed from time to time by the Governor in Council.

16. All vessels fishing under bounty license are required to carry a distinguishing flag, which must be shown at all time, during the fishing voyage at the main top-mast head. The flag must be four feet square in equal parts of red and white, joined diagonally from corner to corner. Any case of neglect to carry out this regulation reported to the Department of Marine and Fisheries will entail the loss of the bounty, unless satisfactory reasons are given for its non-compliance.

JOHN J. McGEE,

Clerk of the Privy Council.

The bounty for the year 1906, was distributed on the basis authorized by the following Order in Council, approved by the Governor General on the 19th January, 1907.

The Governor General in Council is pleased to order and it is hereby ordered that the sum of one hundred and sixty thousand dollars, payable under the provisions of the Act 54-55 Victoria chap. 42, intituled : "An Act to amend chapter 96 of the revised Statutes, intituled : 'An Act to encourage the development of the Sea Fisheries and the building of fishing vessels,' be distributed for the year 1906-1907, upon the following basis :—

Vessels: The owners of the vessels entitled to receive bounty shall be paid one dollar (\$1) per registered ton, provided, however, that the payment of the owner of any one vessel shall not exceed the sum of eighty dollars (\$80), and all vessel fishermen entitled to receive bounty shall be paid the sum of seven dollars and ten cents (\$7.10) each.

Boats: Fishermen engaged in fishing in boats, who shall also have complied with the regulations entitling them to receive bounty, shall be paid the sum of three dollars and seventy-five cents (\$3.75) each, and the owners of fishing boats shall be paid one dollar (\$1) per boat.

JOHN J. McGEE,

Clerk of the Privy Council.

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There were received for the year 1906, 13,533 claims, an increase of 347 as compared with 1905.

The number of claims paid during the year was 13,503, an increase of 362 as compared with the previous year.

There were \$68,208.70 in bounties paid to vessels and their crews, and \$90,807.05 to boats and boat fishermen, making the total payments during the year 1906, \$159,015.75.

The number of vessels which received bounty during the year was 957, the total tonnage being 24,632 tons, an increase of 35 vessels and a decrease of 1,054 tons.

During the year bounty was paid on 12,546 boats and to 20,871 boat fishermen, being an increase of 327 boats and 370 men as compared with 1905.

DETAILED STATEMENT of Fishing Bounty Claims received and paid during the year 1906.

Province.	County.	NUMBER OF CLAIMS.		
		Received.	Rejected.	Paid.
Nova Scotia	Annapolis	155		155
	Antigonish	138		138
	Cape Breton	458	1	457
	Cumberland	2		2
	Digby	478	7	471
	Guysborough	1,001		1,001
	Halifax	1,484	3	1,481
	Hants			
	Inverness	341	1	340
	King's	55		55
	Lunenburg	1,121	3	1,118
	Pictou	15		15
	Queen's	204		204
	Richmond	713	2	711
	Shelburne	677	2	675
	Victoria	339		339
	Yarmouth	253		253
	Totals	7,434	19	7,415
New Brunswick	Charlotte	455	4	451
	Gloucester	398	2	396
	Kent	53		53
	Northumberland	5		5
	Restigouche	1		1
	St. John	18	1	17
	Totals	930	7	923
Prince Edward Island	King's	511	2	509
	Prince	292		292
	Queen's	115		115
	Totals	918	2	916
Quebec	Bonaventure	767		767
	Gaspé	2,508	2	2,506
	Rimouski	131		131
	Saguenay	845		845
	Totals	4,251	2	4,249
	Grand totals	13,533	30	13,503

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DETAILED STATEMENT of Fishing Bounties paid to Vessels in each County during the Year 1906.

Province.	County.	Number of Vessels.	Tonnage.	Average Tonnage.	Number of Men.	Amount paid.
						\$ cts
Nova Scotia.....	Annapolis.....	7	149	21.28	38	418 80
	Antigonish.....	1	17	17...	4	45 40
	Cape Breton.....	15	292	19.46	66	760 60
	Cumberland.....	2	37	18.50	6	79 60
	Digby.....	51	1,366	26.78	371	4,000 10
	Guysborough.....	63	1,053	16.71	297	3,161 70
	Halifax.....	70	1,698	24.25	436	4,793 60
	Hants.....					
	Inverness.....	24	294	12.25	102	1,018 20
	King's.....					
	Lunenburg.....	137	9,694	70.76	2,061	24,327 10
	Pictou.....	1	16	16...	2	30 20
	Queen's.....	7	165	23.57	44	477 40
	Richmond.....	60	1,368	22.86	347	3,831 70
	Shelburne.....	123	2,042	16.60	613	6,394 30
	Victoria.....	7	93	13.28	56	348 60
	Yarmouth.....	76	1,724	22.68	468	5,046 80
	Totals.....	644	20,008	31.07	4,891	54,734 10
New Brunswick.....	Charlotte.....	58	1,012	17.44	220	2,574 00
	Gloucester.....	203	2,514	12.38	801	8,205 10
	Kent.....	1	10	10...	3	31 30
	Northumberland.....	4	50	12.50	13	142 30
	Restigouche.....	1	26	26...	4	54 40
	St. John.....	6	141	23.50	25	318 50
	Totals.....	273	3,753	13.74	1,066	11,325 60
Prince Edward Island.	King's.....	17	448	26.35	66	916 60
	Prince.....	7	142	20.28	32	369 20
	Queen's.....	8	142	17.75	49	489 90
	Totals.....	32	732	22.87	147	1,775 70
Quebec.....	Bonaventure.....					
	Gaspé.....	6	91	15.16	26	275 60
	Rimouski.....					
	Saguenay.....	2	48	24...	7	97 70
	Totals.....	8	139	17.37	33	373 30
	Grand totals....	957	24,632	25.74*	6,137	68,208 70

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DETAILED STATEMENT of Fishing Bounties paid to Boats in each County during the Year 1906, showing also total amount paid to Vessels and Boats for the Year,

Province.	County.	Number of Boats.	Number of Men	Amount paid.	Total Bounty paid to Vessels and Boats in 1906.
				\$ cts.	\$ cts.
Nova Scotia.....	Annapolis.....	148	231	1,014 25	1,433 05
	Antigonish.....	137	212	932 00	977 40
	Cape Breton.....	442	819	3,513 25	4,273 85
	Cumberland.....				79 60
	Digby.....	420	733	3,168 75	7,168 85
	Guysborough.....	938	1,478	6,480 50	9,642 20
	Halifax.....	1,411	1,839	8,307 25	13,100 85
	Hants.....				
	Inverness.....	316	564	2,431 00	3,449 20
	King's.....	55	86	377 50	377 50
	Lunenburg.....	981	1,175	5,387 25	29,714 35
	Pictou.....	14	25	107 75	137 95
	Queen's.....	197	299	1,318 25	1,795 65
	Richmond.....	651	1,010	4,438 50	8,270 20
	Shelburne.....	552	887	3,878 25	10,272 55
	Victoria.....	332	514	2,255 70	2,604 30
	Yarmouth.....	177	266	1,174 50	6,221 30
	Totals.....	6,771	10,138	44,784 70	99,518 80
New Brunswick.....	Charlotte.....	393	576	2,553 00	5,127 00
	Gloucester.....	193	456	1,903 70	10,108 80
	Kent.....	52	86	374 50	405 80
	Northumberland.....	1	2	8 50	150 80
	Restigouche.....				54 40
	St. John.....	11	19	82 25	400 75
	Totals.....	650	1,139	4,921 95	16,247 55
Prince Edward Island.....	King's.....	492	800	3,491 70	4,408 30
	Prince.....	285	616	2,595 00	2,964 20
	Queen's.....	107	232	977 00	1,466 90
	Totals.....	884	1,648	7,063 70	8,839 40
Quebec.....	Bonaventure.....	767	1,379	5,938 25	5,938 25
	Gaspé.....	2,500	4,912	20,918 20	21,193 80
	Rimouski.....	131	212	926 00	926 00
	Saguenay.....	843	1,443	6,254 25	6,351 95
	Totals.....	4,241	7,946	34,036 70	34,410 00
	Grand totals..	12,546	20,871	90,807 05	159,015 75

GENERAL STATISTICS.

The fishing bounty was first paid in 1882.

The payments were made each year on the following basis :—

1882, vessels \$2 per ton, one half to the owner and the other half to the crew.
Boats at the rate of \$5 per man, one-fifth to the owner and four-fifths to the men.

1883, vessels \$2 per ton, and boats \$2.50 per man, distributed as in 1882.

1884, vessels \$2 per ton, as in 1882 and 1883.

Boats from 14 to 18 feet keel.....	\$1 00
“ 18 to 25 “	1 50
“ 25 feet keel upwards.....	2 00
Boat fishermen.....	3 00

1885, 1886 and 1887, vessels \$2 per ton as in previous years. Boats measuring 13 feet keel having been admitted in 1885, the rates were :—Boats from 13 to 18 feet keel, \$1 ; from 18 to 25 feet keel, \$1.50 ; from 25 feet keel upwards, \$2, and fishermen \$3 each.

1888, vessels \$1.50 per ton, one-half each to owner and crew. Boats, the same as 1885, 1886 and 1887.

1889, 1890 and 1891, vessels \$1.50 per ton as in 1888. Boats \$1 each. Boat fishermen, \$3.

1892, vessels \$3 per ton, one-half each to owner and crew. Boats \$1 each. Boat fishermen \$3.

1893, vessels \$2.90 per ton, paid as formerly. Boats \$1 each. Boat fishermen \$3.

1894, vessels \$2.70 per ton, distributed as in previous years. Boats \$1 each. Boat fishermen \$3.

1895, vessels \$2.60 per ton, half each to owner and crew. Boats \$1 each. Boat fishermen \$3.

1896, vessels \$1 per ton, which was paid to the owners, and vessel fishermen \$5 each, clause No. 5 of the regulation having been amended accordingly. Boats \$1 each, and boat fishermen \$3.50 per man.

1897, vessels \$1 per ton, and vessel fishermen \$6 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1898, vessels \$1 per ton, and vessel fishermen \$6.50 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1899, vessels \$1 per ton, and vessel fishermen \$7 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1900, vessels \$1 per ton, and vessel fishermen \$6.50 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1901, vessels \$1 per ton, and vessel fishermen \$7 each. Boats \$1 each, and boat fishermen, \$3.50 per man.

1902, vessels \$1 per ton, and vessel fishermen \$7.25 each. Boats \$1 each, and boat fishermen \$3.80 per man.

1903, vessels \$1 per ton, and vessel fishermen \$7.30 each. Boats \$1 each, and boat fishermen \$3.90 per man.

1904, vessels \$1 per ton, and vessel fishermen \$7.15 each. Boats \$1 each, and boat fishermen \$3.75 per man.

1905, vessels \$1 per ton, and vessel fishermen \$7.10 each. Boats \$1 each and boat fishermen \$3.65 per man.

1906, vessels \$1 per ton, and vessel fishermen \$7.10 each. Boats \$1 each and boat fishermen \$3.75 per man.

Since 1882, 20,610 vessels, totalling a tonnage of 709,662 tons, have received the bounty. The total number of vessel fishermen which received bounty is 156,006, being an average of about 7 men per vessel.

The total number of boats to which bounty was paid since 1882 is 336,802, and the number of fishermen 613,026. Average number of men per boat about 2.

The highest bounty paid per head to vessel fishermen was \$21.75 in 1893 ; the lowest 83 cents, while the highest to boat fishermen was \$4, the lowest \$2.

The general average paid per head is \$5.13.

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COMPARATIVE STATEMENT by Provinces for the Years 1882 to 1906, inclusive, showing:—
 (1) Total number of Fishing Bounty Claims received and paid by the Department of Marine and Fisheries.

YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		P. E. ISLAND.		QUÉBEC.		TOTAL.	
	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.
1882...	6,730	6,613	1,257	1,142	1,169	1,100	3,162	3,117	12,318	11,972
1883...	7,171	7,076	1,693	1,579	1,138	1,106	3,602	3,325	13,604	13,086
1884...	7,007	6,930	1,252	1,224	923	885	3,470	3,429	12,652	12,468
1885...	7,646	7,599	1,609	1,588	1,117	1,025	3,943	3,912	14,315	14,124
1886...	7,639	7,702	1,767	1,763	1,131	1,080	4,275	4,355	14,812	14,900
1887...	8,262	8,227	1,975	1,958	1,201	1,126	4,138	4,105	15,576	15,416
1888...	8,481	8,429	2,065	2,026	1,153	834	4,328	4,310	16,027	15,599
1889...	8,816	8,523	2,428	2,392	1,211	1,511	4,664	4,652	17,119	17,078
1890...	9,337	9,429	2,522	2,469	1,352	1,257	4,860	4,804	18,071	17,959
1891...	10,242	10,063	2,831	2,084	1,482	1,446	5,108	4,913	19,663	18,506
1892...	8,272	8,186	1,067	1,001	1,065	1,051	4,425	4,204	14,829	14,442
1893...	7,926	7,844	967	881	1,027	1,012	4,059	3,898	13,979	13,635
1894...	8,640	8,600	925	911	983	963	3,948	3,876	14,496	14,350
1895...	8,835	8,825	979	975	1,009	1,025	3,904	3,955	14,727	14,780
1896...	8,597	8,562	1,137	1,064	1,111	1,120	4,366	4,229	15,211	14,975
1897...	8,450	8,418	1,042	991	1,175	1,171	4,180	4,149	14,847	14,729
1898...	8,446	8,347	934	917	1,143	1,145	4,156	4,092	14,679	14,501
1899...	7,894	7,754	849	825	1,016	947	4,134	4,102	13,893	13,628
1900...	7,484	7,452	904	904	1,119	1,169	4,264	4,251	13,771	13,776
1901...	7,346	7,344	829	826	941	937	4,277	4,267	13,393	13,374
1902...	6,710	6,671	802	794	913	912	4,371	4,346	12,796	12,723
1903...	6,297	6,284	832	830	978	974	4,110	4,090	12,217	12,178
1904...	6,750	6,732	879	866	1,027	994	4,095	4,079	12,751	12,671
1905...	7,034	7,018	881	873	921	921	4,350	4,329	13,186	13,141
1906...	7,434	7,415	930	923	918	916	4,251	4,249	13,533	13,503
Totals	197,446	196,043	33,356	31,806	27,223	26,627	104,440	103,038	362,465	357,514

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(2) NUMBER of vessels, tonnage and number of men which received Bounty in each year.

YEAR.	NOVA SCOTIA.			NEW BRUNSWICK.			P. E. ISLAND.			QUEBEC.			TOTAL.		
	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.
1882....	588	22,841	5,343	120	2,171	531	15	389	74	63	2,210	538	786	27,611	6,486
1883....	700	29,788	6,238	126	2,102	496	16	450	66	62	2,236	443	904	34,576	7,243
1884....	700	29,828	6,327	139	2,289	560	16	582	92	56	1,965	382	911	34,664	7,361
1885....	629	27,709	5,897	128	2,120	496	19	597	113	55	1,791	317	831	32,217	6,823
1886....	562	25,375	5,022	145	2,628	520	32	1,071	215	52	1,730	320	791	30,804	6,077
1887....	566	24,520	4,900	154	2,889	563	38	1,677	338	54	1,883	334	812	30,969	6,135
1888....	589	26,008	5,450	150	2,545	544	37	1,245	249	51	1,842	388	827	31,640	6,631
1889....	597	27,123	5,684	153	2,590	565	35	1,274	239	48	1,729	330	833	32,716	6,818
1890....	540	23,955	4,935	133	2,129	447	32	1,002	203	34	1,182	220	739	28,268	5,805
1891....	527	22,780	4,618	124	2,051	411	27	778	155	27	924	168	705	26,533	5,352
1892....	507	22,279	4,611	108	1,683	343	30	983	139	23	803	159	668	25,748	5,252
1893....	536	23,195	4,780	210	2,922	634	27	910	151	32	952	179	805	27,979	5,744
1894....	602	24,735	5,077	238	3,189	721	21	594	114	38	1,066	178	899	29,584	6,090
1895....	603	25,018	5,184	238	3,107	764	27	769	129	39	1,262	173	907	30,156	6,250
1896....	553	23,415	4,607	250	3,337	800	23	656	114	36	1,143	144	862	28,551	5,665
1897....	507	21,323	4,829	239	3,079	816	20	490	109	24	833	116	790	25,725	5,870
1898....	505	20,868	4,840	239	3,155	859	24	561	125	16	524	77	784	25,108	5,901
1899....	519	22,538	5,323	238	3,131	885	15	373	76	17	497	78	789	26,538	6,362
1900....	525	22,474	5,352	234	2,969	890	29	737	153	14	459	76	802	26,639	6,471
1901....	508	21,469	5,158	242	3,229	872	23	541	115	13	366	69	786	25,605	6,214
1902....	505	21,248	5,126	249	3,293	972	28	630	135	13	350	51	795	25,521	6,284
1903....	546	21,992	5,173	259	3,454	971	36	765	169	10	290	48	851	26,501	6,361
1904....	552	21,285	5,040	257	3,429	981	30	594	126	15	382	73	854	25,690	6,220
1905....	620	21,240	5,238	264	3,600	1,035	28	587	125	10	259	56	922	25,686	6,454
1906....	644	20,008	4,891	273	3,753	1,066	32	732	147	8	139	33	957	24,632	6,137
Totals..	14,230	593,014	129,643	4,910	70,844	17,742	660	18,987	3,671	810	26,817	4,950	20,610	709,662	156,006

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(3) NUMBER of Boats and boat fishermen which received Bounty in each year.

YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		P. E. ISLAND.		QUEBEC.		TOTAL.	
	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.
1882	6,043	12,130	1,024	2,530	1,087	3,070	3,071	5,716	11,225	23,446
1883.....	6,458	13,553	1,453	3,309	1,098	3,106	3,266	6,188	12,275	26,156
1884.	6,257	12,669	1,086	2,505	869	2,346	3,344	6,416	11,556	23,936
1885.....	6,970	13,396	1,460	3,254	1,006	2,606	3,857	7,485	13,293	26,741
1886.....	7,140	13,351	1,618	3,567	1,048	2,547	4,303	7,981	14,109	27,446
1887.....	7,662	13,997	1,804	3,994	1,088	2,711	4,051	7,550	14,605	28,252
1888.....	7,840	14,115	1,876	4,148	797	2,141	4,259	7,852	14,772	28,256
1889.....	7,926	14,118	2,237	5,032	1,475	3,568	4,602	8,807	16,240	31,525
1890.....	8,886	15,738	2,324	5,242	1,192	3,024	4,766	9,241	17,168	33,245
1891	9,525	16,552	1,928	4,126	1,383	3,427	4,865	9,402	17,701	33,507
1892	7,679	12,307	893	1,765	1,021	2,047	4,181	7,693	13,774	23,812
1893.....	7,308	11,748	671	1,314	985	1,962	3,866	7,245	12,830	22,269
1894.....	7,956	12,899	661	1,281	913	1,813	3,821	7,139	13,351	23,132
1895.....	8,222	13,106	737	1,434	998	2,141	3,916	7,877	13,873	24,558
1896.	8,008	12,454	814	1,553	1,095	2,126	4,189	7,688	14,106	23,821
1897.....	7,911	12,542	752	1,351	1,151	2,147	4,125	7,572	13,939	23,612
1898.....	7,872	12,438	678	1,237	1,121	2,199	4,076	7,627	13,747	23,501
1899.....	7,235	11,305	587	1,027	932	1,710	4,085	7,696	12,839	21,738
1900.....	6,927	10,645	670	1,184	1,140	2,198	4,237	8,004	12,974	22,031
1901.....	6,836	10,464	584	1,001	914	1,735	4,254	8,017	12,588	21,217
1902.....	6,166	9,442	545	966	884	1,638	4,333	8,180	11,928	20,226
1903.....	5,738	8,775	571	964	938	1,722	4,080	7,688	11,327	19,149
1904.....	6,180	9,556	609	1,082	964	1,792	4,064	7,648	11,817	20,078
1905.....	6,398	9,822	609	1,047	893	1,630	4,319	8,002	12,219	20,501
1906.	6,771	10,138	650	1,139	884	1,648	4,241	7,946	12,546	20,871
Totals.....	181,914	307,260	26,841	56,052	25,876	57,054	102,171	192,660	336,802	613,026

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(4) TOTAL Number of men receiving Bounty in each year.

YEAR.	NOVA SCOTIA.	NEW BRUNSWICK.	P. E. ISLAND.	QUEBEC.	TOTAL.
	No. of Men.	No. of Men.	No. of Men.	No. of Men.	
1882.....	17,473	3,061	3,144	6,254	29,932
1883.....	19,791	3,805	3,172	6,631	33,399
1884.....	18,996	3,065	2,438	6,798	31,297
1885.....	19,293	3,750	2,719	7,802	33,564
1886.....	18,373	4,087	2,762	8,301	33,523
1887.....	18,897	4,557	3,049	7,884	34,387
1888.....	19,565	4,692	2,390	8,240	34,887
1889.....	19,802	5,597	3,807	9,137	38,343
1890.....	20,673	5,689	3,227	9,461	39,050
1891.....	21,170	4,537	3,582	9,570	38,859
1892.....	16,918	2,108	2,186	7,852	29,064
1893.....	16,528	1,948	2,113	7,424	28,013
1894.....	17,976	2,002	1,927	7,317	29,222
1895.....	18,290	2,198	2,270	8,050	30,808
1896.....	17,061	2,353	2,240	7,832	29,486
1897.....	17,371	2,167	2,256	7,688	29,482
1898.....	17,278	2,096	2,324	7,704	29,402
1899.....	16,628	1,912	1,786	7,774	28,100
1900.....	15,997	2,074	2,351	8,080	28,502
1901.....	15,622	1,873	1,850	8,086	27,431
1902.....	14,568	1,938	1,773	8,231	26,510
1903.....	13,948	1,935	1,891	7,736	25,510
1904.....	14,596	2,063	1,918	7,721	26,298
1905.....	15,060	2,082	1,755	8,058	26,955
1906.....	15,029	2,205	1,795	7,979	27,008
Totals.....	436,903	73,794	60,725	197,610	769,032

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(5) TOTAL annual payments of Fishing Bounty.

YEAR.	Nova Scotia.	New Brunswick.	P. E. Island.	Quebec.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1882.....	106,098 72	16,997 00	16,137 00	33,052 75	172,285 47
1883.....	89,432 50	12,395 20	8,577 14	19,940 01	130,344 85
1884.....	104,934 09	13,576 00	9,203 96	28,004 93	155,718 98
1885.....	103,999 73	15,908 25	10,166 65	31,464 76	161,539 39
1886	98,789 54	17,894 57	10,935 87	33,283 61	160,903 59
1887.....	99,622 03	19,699 65	12,528 51	31,907 73	163,757 92
1888	89,778 90	18,454 92	9,092 96	32,858 75	150,185 53
1889.....	90,142 51	21,026 79	13,994 53	33,362 71	158,526 54
1890	91,235 64	21,108 33	11,686 32	34,210 72	158,241 01
1891.....	92,377 42	17,235 96	12,771 30	34,507 17	156,891 85
1892.....	109,410 39	10,864 61	9,782 79	29,694 35	159,752 14
1893	108,060 67	12,524 09	9,328 62	28,320 72	158,234 10
1894	111,460 03	12,690 80	7,875 79	28,040 18	160,066 80
1895.....	110,765 27	12,919 32	9,285 13	30,598 27	163,567 99
1896.....	98,048 95	13,602 88	9,745 50	32,992 44	154,389 77
1897.....	102,083 50	13,454 50	9,809 00	32,157 00	157,504 00
1898	103,730 00	13,746 00	10,188 00	31,795 00	159,459 00
1899	106,598 50	13,514 50	7,822 00	32,065 00	160,000 00
1900.....	101,448 00	13,562 50	10,589 00	33,203 00	158,802 50
1901.....	101,024 50	13,420 50	8,335 50	33,161 50	155,942 00
1902.....	100,455 70	14,555 80	8,716 55	36,125 45	159,853 50
1903.....	99,714 15	14,872 75	9,652 50	34,704 30	158,943 70
1904.....	99,286 44	15,110 80	9,179 35	33,651 65	157,228 24
1905	100,664 35	15,379 50	8,317 20	34,185 60	158,546 65
1906	99,518 80	16,247 55	8,839 40	34,410 00	159,015 75
Totals.....	2,518,680 33	380,762 77	232,560 57	797,697 60	3,949,701 27

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List of Vessels which received Fishing Bounty during the Year 1906.

PROVINCE OF NOVA SCOTIA.

ANNAPOLIS COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
80093	Anna K.	St. John.	14	Edward Fales	Margaretville.	1	21 10
90655	Annina.	Yarmouth.	12	E. Robinson.	Parker's Cove.	7	61 70
103066	Eddie J.	"	23	Jas. W. Snow.	Port Wade.	3	44 30
111998	Jessie K.	Annapolis.	11	Thos. Milner	Parker's Cove.	5	46 50
85534	Lloyd.	Yarmouth.	31	W. H. Anderson.	"	9	94 90
100539	Rowena.	Digby.	10	Jno. F. Peters.	Litchfield.	3	31 30
107293	S. C. H.	Annapolis.	48	Wm. McGrath.	Port Wade.	10	119 00

ANTIGONISH COUNTY.

103542	Emma Brow.	Halifax.	17	Jno. Brow.	Hbr. au Bouche.	4	45 40
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CAPE BRETON COUNTY.

112376	Agnes.	Arichat.	15	Pat'k Wadden.	Scatarie Isld.	4	43 40
100846	Albatross.	Lunenburg.	26	Jno. Arsenault.	L. Bras d'or.	7	75 70
100389	Annie F.	Sydney.	13	John Farrell.	Mainadien.	4	41 40
100372	Betsy Jane.	"	11	Samuel Moore.	L. Bras d'or.	4	39 40
90834	Diego.	Port Medway.	27	Thos. Peach.	Port Morien.	7	76 70
116521	Ellwood.	Lunenburg.	16	R. D. Nutter.	B. Place Bay.	4	44 40
100383	Florence F.	Sydney.	10	S. Curry.	Port Morien.	7	59 70
94788	Laura C. Zwicker.	Lunenburg.	85	Jno. Arsenault.	L. Bras d'or.	4	108 40
103412	Minnie B.	"	25	W. T. Eastman.	North Sydney.	4	53 40
107375	Minnie B.	"	10	G. Billard.	Louisburg.	3	31 30
107376	Rozzie.	Sydney.	17	Robt. Fudge.	North Sydney.	4	45 40
112386	Shamrock.	"	11	Jacob Rogers.	"	3	32 30
111902	St. Thomas.	Arichat.	10	Alex. Ley.	L. Lorraine.	3	31 30
107359	Victoria.	Sydney.	11	Benj. Boone.	Bateston.	5	46 50
107351	Wilfrid Laurier.	"	10	Philip May.	North Sydney.	3	31 30

CUMBERLAND COUNTY.

111425	Effie Howard.	Halifax.	23	E. R. Heather.	Pugwash.	5	58 50
103593	Jessie & Ada.	Charlottetown.	14	Geo. Heather.	"	1	21 10

DIGBY COUNTY.

112286	A. E. Moore.	Digby.	11	A. R. Bailey.	Westport.	4	39 40
111528	Alart.	"	11	Ben Doucett.	Mavillette.	3	32 30
116235	Alycove.	"	52	Howard Anderson.	Digby.	5	87 50
107807	America.	St. John.	16	Reuben Thurber.	Freeport.	5	51 50
112102	Ariadne.	"	48	H. Outhouse.	Tiverton.	13	140 30
100547	B. and C.	Digby.	14	Jno. W. Thurber Sr.	Freeport.	4	42 40
100813	Blanche.	Barrington.	24	Wesley Leeman.	Tiverton.	5	59 50
111898	Catherine.	Weymouth.	11	A. Belliveau.	Grosses Coques.	5	46 50
74331	Condor.	Yarmouth.	11	Howard Titus.	Westport.	4	39 40
116236	Cora May.	Digby.	64	J. W. Moran.	Freeport.	18	191 80
103181	Curlew.	"	63	Geo. Denton.	Westport.	17	183 70
107112	Daisy Linden.	"	97	David Sproule.	Digby.	14	179 40
116239	Edna L.	"	11	K. H. A. Lewis.	Rossway.	3	32 30

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LIST OF Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*DIGBY COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
103749	Emerald.....	Digby.....	29	Ansel Casey.....	Digby.....	12	114 20
116446	Emerson Faye.....	Shelburne.....	47	M. Hains.....	Freeport.....	14	146 40
121657	Emily C.....	Yarmouth.....	11	N. Comeau.....	Bear Cove.....	4	39 40
107604	Emma D.....	Weymouth.....	20	F. S. Doucette.....	Mavillette.....	4	48 40
111527	Etta H.....	Digby.....	10	Jas. Buckman.....	Westport.....	3	31 30
85476	Fleetwing.....	Shelburne.....	15	Handley Outhouse.....	Tiverton.....	4	43 40
122097	George L.....	Yarmouth.....	13	John J. LeBlanc.....	Mavillette.....	5	48 50
107480	Hattie & Eva.....	Digby.....	11	Edwin Hains.....	Freeport.....	4	39 40
111688	Hazlewood.....	Shelburne.....	29	Geo. C. Stevens.....	".....	10	100 00
111530	Island Girl.....	Digby.....	10	Esrom Thurber.....	".....	3	31 30
116234	J. W.....	".....	14	Whale Cove Trading Co.	Whale Cove.....	7	63 70
111525	James W. Cousins..	".....	87	Jos. Milberry.....	Digby.....	22	236 20
111838	Lavina D.....	".....	21	James Doucette.....	Mavillette.....	7	70 70
75851	Little Annie.....	Weymouth.....	16	P. H. Belliveau.....	Belliveau's Cove.	2	30 20
122101	Lizzie B.....	Yarmouth.....	18	L. Boudreau.....	Mavillette.....	6	60 60
116210	Lucy A.....	".....	32	John T. Therrio.....	Meteghan.....	6	74 60
116237	Maple Leaf.....	Digby.....	10	H. P. Denton.....	Westport.....	3	31 30
103184	May Flower.....	".....	26	John W. Snow.....	Digby.....	7	75 70
111896	May Queen.....	Weymouth.....	15	Moses Thibodeau.....	Church Point.....	5	50 50
85533	Minnie C.....	Digby.....	12	George R. Raymond.....	Digby.....	2	26 20
116232	Nettie M.....	".....	12	Wm. McDormand.....	Westport.....	4	40 40
100895	New Home.....	Weymouth.....	31	Arthur Doucette.....	Mavillette.....	4	59 40
94830	Nina Blanche.....	".....	31	J. W. Moran.....	Freeport.....	10	102 00
116660	Nora.....	Yarmouth.....	11	Philemon Doucett.....	Mavillette.....	5	46 50
112285	Ospray.....	Digby.....	16	F. H. Corning.....	Beaver Harbour..	4	44 40
111834	Rosan.....	".....	11	F. J. Doucett.....	Mavillette.....	3	32 30
111835	Roxana.....	".....	11	Ainsley Titus.....	Westport.....	2	25 20
107334	Shamrock.....	Yarmouth.....	17	R. Thurber.....	Freeport.....	5	52 50
112289	Souvenir.....	Digby.....	27	J. O. Robichaud.....	Meteghan.....	5	62 50
111840	Sparrow.....	".....	28	M. Theriault.....	".....	5	63 50
111834	Sunlocks.....	".....	59	J. Robbins.....	Tiverton.....	14	158 40
100609	Swan.....	Shelburne.....	56	Edwin Hains.....	Freeport.....	14	155 40
103179	Trilby.....	Digby.....	31	L. E. Perry.....	".....	9	94 90
94694	Utah & Eunice.....	".....	33	Milton Hains.....	".....	9	96 90
80630	Vanity.....	Yarmouth.....	11	F. P. Titus.....	Westport.....	3	32 30
100543	W. Parnell O'Hara.	Digby.....	79	Joseph E. Snow, <i>et al.</i>	Digby.....	16	192 60
77969	Wave Queen.....	St. Andrews.....	11	Thomas Denton.....	Little River.....	2	25 20
121812	Wiffred L. Snow...	Digby.....	36	Edward Keans.....	Digby.....	9	99 90

GUYSBORO' COUNTY.

107992	Alice J. Davis.....	Canso.....	20	Edward Hearn.....	Canso.....	4	48 40
111422	Annie B.....	Halifax.....	26	Ben. Boudro.....	Port Felix.....	5	61 50
112021	Annie M.....	Canso.....	29	John Leary.....	Queensport.....	5	64 50
90495	Annie S.....	Halifax.....	34	David Boudro.....	Port Felix.....	10	105 00
112016	Blanche.....	Canso.....	13	S. Williams.....	Canso.....	4	41 40
112020	Bonny Kate.....	".....	14	R. Sutherland.....	".....	3	35 30
112375	C. G. Munro.....	Arichat.....	14	Chas. Mosher.....	".....	4	42 40
103328	Ella May.....	Pt. Hawkesbury.	34	Hibbert Carr.....	Mulgrave.....	4	62 40
117054	Emma Jane.....	Canso.....	16	John L. George.....	Up. White Head.	6	58 60
116347	Ethel.....	Arichat.....	11	Jas R. Sinclair.....	Canso.....	2	25 20
116890	Ethel G.....	".....	12	Daniel George.....	White Head.....	5	47 50
116882	Fiona.....	".....	10	Martin Pelrine.....	Larry's River.....	5	45 50
117093	Florence D.....	".....	11	Hubert Dorion.....	Port Felix.....	6	53 60
107993	Florence May.....	Canso.....	11	John Kennedy.....	Canso.....	6	53 60
112373	Flying Cloud.....	Arichat.....	13	Simon Manett.....	Larry's River.....	4	41 40
100818	Geneva Ethel.....	Barrington.....	29	Martin Meagher.....	Canso.....	5	64 50
116883	Grayling.....	Arichat.....	25	W. H. Reeves.....	Middle Melford..	4	53 40
107996	Green Linnet.....	Canso.....	12	Thomas Boudrot, jr.	Dover.....	4	40 40

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List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*GUYSBORO' COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
117091	Hazel Maud.	Arichat.	10	James Rhynold.	Dover.	4	38 40
116740	Hilda M. Horton..	Halifax.	29	E. F. C. Horton.	Port Beckerton.	5	64 50
103470	Ida M. Burk.	Arichat.	16	Jos. Fougere.	Larry's River.	4	44 40
112374	J. B. Saint.	"	18	Robt. Hendsbee.	Half Isl'd Cove.	6	60 60
111903	Laura B. G.	"	10	Benj. Gerrior.	Charlo's Cove.	3	31 30
111910	Lizzie J. Greenleaf.	"	11	Jos. H. Richard.	"	6	53 60
117097	Lizzie May.	"	12	Benj. L. Pelrine.	Larry's River.	5	47 50
117098	Lottie M. Beatrice.	"	17	Hiram Hendsbee, sr.	Half Isl'd Cove.	4	45 40
117100	Louisa Ellen.	"	11	Patrick Conway.	White Head.	4	39 40
117094	Maggie Alice.	"	11	John D. Cashin.	Port Felix.	3	32 30
112018	Maggie Bell.	Canso.	26	James W. Grady.	St. Francis Hbr.	8	82 80
112136	Maple Leaf.	Shelburne.	48	Jno. Cousins.	Canso.	10	119 00
111909	Margaret May.	Arichat.	12	Jas. Sullivan.	"	5	47 50
112371	Mary A.	"	11	Daniel Casey.	Raspberry.	3	32 30
116886	Mary J.	"	11	Wm. Diggon.	White Head.	3	32 30
117053	Mary M. Bell.	Canso.	10	Jno. Bellfountain.	Port Felix.	4	38 40
111475	Mary Matilda.	Arichat.	15	Fredk. Pelrine.	Larry's River.	6	57 60
100816	Mattie Morrissey.	Canso.	24	Benj. David.	Port Felix.	6	66 60
107999	Maud S.	"	12	Havelock Munroe.	Canso.	3	33 30
107757	Mayflower.	Charlottetown.	18	J. R. Lumsden.	"	4	46 40
112022	Minnie J.	Canso.	14	Jas. Feltmate.	Yankie Cove.	5	49 50
100446	Minnie May.	"	12	Chas. H. Richard.	Charlo's Cove.	6	54 60
100450	Minto.	"	18	William O'Hara.	Canso.	2	32 20
107998	Money Bush.	"	15	Thos. Richard.	Port Felix.	6	57 60
103547	Morning Glory.	Halifax.	11	Jno. J. Gerrior.	Larry's River.	3	32 30
117051	Muriel G.	Canso.	21	Alden Munroe.	L. Whitehead.	3	42 30
80970	Orion.	Halifax.	24	Jos. Pelrine, Sr.	Larry's River.	6	66 60
112024	Reta S.	Canso.	13	Wm. Shrader.	Canso.	6	55 60
112372	River Swan.	Arichat.	11	Geo. Berrigan.	"	4	39 40
74139	Sadie.	Halifax.	44	Isaiah Fougere.	Larry's River.	6	86 60
100255	Seaflee.	"	12	Howard Munroe.	White Head.	4	40 40
111413	Sigdrifa.	Lunenburg.	13	Wm. Dort.	Cole Harbour.	5	48 50
112023	Silver Bell.	Canso.	14	S. J. Pelrine.	Larry's River.	3	35 30
116884	Silver Swan.	Arichat.	20	Joseph Bonvie.	"	4	48 40
112025	Squanto.	Canso.	13	F. H. Hawes.	Canso.	5	48 50
96962	Sunrise.	Yarmouth.	18	Thurlo Munroe.	L. White Head.	3	39 30
103461	St. Lidwina.	Arichat.	11	Abner J. Munroe.	Cole Harbour.	5	46 50
108000	St. Patrick.	Canso.	18	Geo. L. Avery.	Larry's River.	6	60 60
107318	St. Stephen.	Halifax.	19	Moses Cohoon.	Canso.	6	61 60
116885	T. Lilly.	Arichat.	10	Wm. Peart.	Tor Bay.	3	31 30
117052	Thrush.	Canso.	10	David Myers.	Canso.	2	24 20
103199	Trilby.	"	12	E. Flaherty.	"	5	47 50
107994	True Love.	"	10	David Walsh.	"	2	24 20
107991	Two Brothers.	"	14	Fredk. Gello.	Port Felix.	6	56 60
116887	Wenona.	Arichat.	10	Jno. Uloth.	Cole Harbour.	5	45 50

HALIFAX COUNTY.

94632	A. C. Greenwood..	Shelburne.	15	Ernest Mason.	Tangier.	5	50 50
121932	Addie M.	Halifax.	11	Isaac Morash.	West Dover.	3	32 30
116526	Adelaide.	Lunenburg.	13	James F. Gray.	Pennant.	4	41 40
107313	Alice A.	Halifax.	16	Wm. McPherson.	Tangier.	4	44 40
121933	Annie May.	"	24	H. Gerrard, et al.	Gerrard's Isl'd.	5	59 50
103858	B. & B. Holland..	"	26	R. Holland.	Duncan's Cove.	8	82 80
116278	Christie Belle.	"	13	Zachariah Beaver.	Srory Bay.	2	27 20
117145	Dove.	"	10	Geo. Myria.	Petpiewick Hbr.	3	31 30
111428	Duchess.	"	12	David Morash.	West Dover.	2	26 20
77603	Eldon C.	"	27	Isaac Bowser.	Musquodoboit Hbr.	8	83 80

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List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*HALIFAX COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
111434	Ermynthrude.....	Halifax.....	36	Fred. J. Darrach.....	Herring Cove...	10	107 00
117141	Etha May.....	".....	11	Geo. Johnson.....	West Dover....	3	32 30
100247	Fairy Queen.....	".....	11	Geo. H. Nickerson...	Pennant.....	3	32 50
116290	Flora M. J.....	".....	78	John Julien, et al....	W. Chezzetcook	18	205 80
80829	Florence B.....	".....	32	Jas. S. Richardson...	West Jeddore...	7	81 70
100259	Florence G.....	".....	15	Caleb Gray.....	Sambro.....	4	43 40
111432	Gladys Elena.....	".....	16	Chas. W. Twohig.....	Pennant.....	3	37 30
107319	Globe.....	".....	32	Chas. W. Hart.....	Sambro.....	12	117 20
103544	Grace D.....	".....	10	Geo. Slaunwhite.....	Terrence Bay...	5	45 50
112131	Grace D. Day.....	Shelburne.....	39	Ainsley Hubley.....	Boutillier's Cove.	11	117 10
111747	Grace Darling.....	Lunenburg.....	100	O. Dauphinee.....	".....	16	193 60
116731	Grand Desert.....	Halifax.....	65	Martin Julien, et al...	W. Chezzetcook.	18	192 80
116738	Gretta.....	".....	14	Alton Russell, et al...	Clam Hbr.....	3	35 30
116287	Handy Andy.....	".....	15	Wm. Westhaver, et al.	Sober Isld.....	4	43 40
112129	Hattie.....	Lunenburg.....	12	Arthur Jollymore.....	Indian Hbr.....	3	33 30
116743	Hattie D.....	Halifax.....	62	Richard Drew.....	Terrence Bay...	10	133 00
116284	Janet R.....	Halifax.....	37	John D. Verge.....	Sober Island....	6	79 60
121934	Jeannie & Annie...	".....	16	Robt. J. Mason.....	Tangier.....	5	51 50
103191	Jennie B.....	Liverpool.....	13	H. Wambolt.....	Indian Hbr.....	4	41 40
116747	Jessie W.....	Halifax.....	12	Henry Weinaut.....	Boutillier's Cove.	3	33 30
100216	Katie M.....	".....	11	Chas. Nelson.....	Halifax.....	3	32 30
103312	Laura.....	Pt. Hawkesbury	13	Reuben Cooper.....	Tangier.....	3	34 30
96797	Laura Phoebe.....	Halifax.....	18	Arthur Day.....	West Jeddore...	6	60 60
116203	Laurel.....	".....	16	Geo. Pelham.....	Herring Cove....	8	72 80
116513	Laurie H.....	Lunenburg.....	16	J. Slaunwhite.....	Terrence Bay...	5	51 50
83402	Louisa Maud.....	Halifax.....	21	Harry Graves.....	East Dover.....	5	56 50
111440	M. A. Josey.....	".....	17	Leander Josey et al...	Spry Bay.....	4	45 40
111424	Maggie M.....	".....	13	Jas. Marryatt.....	Sambro.....	3	34 30
96805	Maggie May.....	".....	62	Jer. Fillis et al....	W. Chezzetcook	17	182 70
116733	Maggie May.....	".....	17	F. J. Flemming.....	Ketch Hbr.....	7	66 70
111435	Maggie Wilson...	".....	36	E. Dempsey, sr.....	Herring Cove....	11	114 10
111421	Maple Leaf.....	".....	25	Eli Baker.....	East Jeddore...	6	67 60
117150	Marie Stella.....	".....	36	Simon Lapierre.....	W. Chezzetcook.	7	85 70
112387	Mary A. Dunphy...	Sydney.....	18	Harry Gibbs.....	Halifax.....	6	60 60
85664	Mary E.....	Halifax.....	14	Warden Covey.....	Indian Hbr.....	4	42 40
117144	Mary E. Faulkner.	".....	14	John Faulkner.....	West Jeddore...	4	42 40
100227	May.....	".....	10	M. Slaunwhite.....	Terrence Bay...	4	38 40
116736	Milo.....	".....	23	Jas. W. Gorman.....	Herring Cove....	5	58 50
116739	Minnie M. Dora...	".....	14	John Beaver.....	Spry Bay.....	3	35 30
116282	Monica A. Thomas.	".....	46	Chas. H. Thomas.....	Herring Cove....	11	124 10
85665	Nellie D.....	".....	12	Wm. Munro.....	Sober Island....	3	33 30
103539	Neva.....	".....	11	E. Marryatt.....	Pennant.....	2	25 20
116745	Perseverance.....	".....	12	E. E. Shatford.....	Indian Hbr.....	3	33 30
94677	Progress.....	".....	14	David Richardson...	De Bay's Cove...	5	49 50
83133	Regina B.....	".....	79	M. Williams.....	Musquodoboit Hbr.....	10	150 00
116749	Reliance.....	".....	14	Wm. Hubley.....	Indian Hbr.....	3	35 30
96806	Rising Sun.....	".....	28	R. Christian.....	Prospect.....	6	70 60
116272	Rosie M. B.....	".....	75	Fred Bonaing et al...	W. Chezzetcook.	13	167 80
116447	San Juan.....	Shelburne.....	42	Geo. L. Baker.....	W. Jeddore.....	6	84 60
100218	Sarah M. W.....	Halifax.....	14	E. Wheatley.....	Terrence Bay...	7	63 70
112137	Shamrock.....	Shelburne.....	37	Edward Hayes.....	Herring Cove....	11	115 10
116750	Stella R.....	Halifax.....	13	Wm. E. Murphy.....	E. Ship Hbr.....	4	41 40
103464	St. Patrick.....	Arichat.....	27	Harris Corkum.....	East Jeddore...	5	62 50
111438	Theresa M. Gray...	Halifax.....	30	Angus Gray.....	Pennant.....	9	93 90
117142	Valkyria.....	".....	13	Harvey Covey.....	Indian Hbr.....	4	41 40
117143	Valmore.....	".....	11	N. Richardson.....	".....	4	39 40
100260	Violet.....	".....	12	Jas. H. Smith.....	Sambro.....	3	33 30
116283	Vixen.....	".....	13	Henry McKeuzie.....	Gerrard's Isld..	4	41 40
92578	Willetta.....	".....	12	Joseph Gray.....	Sambro.....	6	54 60
85378	Zephyr.....	".....	16	Robt. Slaunwhite...	Terrence Bay...	7	65 70

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INVERNESS COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
96778	Campania.....	Pt. Hawkesbury	11	C. Robin, Collas Co...	Eastern Hbr...	4	39 40
103313	Catherine.....	"	10	"	"	4	38 40
103325	Elizabeth Ann.....	"	11	David Bourgeois.....	"	5	46 50
83196	Ethel Blanche.....	Pictou.....	17	Wm. J. Malcolm.....	Pt. Hawkesbury	2	31 20
96774	Florence.....	Pt. Hawkesbury	11	S. Bellefontaine.....	Eastern Hbr.....	5	46 50
103317	Flying Star.....	"	11	"	"	5	46 50
111795	Katie J.....	"	11	Jno. McNeil.....	Pt. Hawkesbury	3	32 30
103316	Laura.....	"	10	U. Bourgeois.....	Eastern Hbr.....	4	38 40
103318	Lillie.....	"	12	Peter Fiset.....	"	4	40 40
96775	Louise.....	"	11	S. Bellefontaine et al.....	"	4	39 40
103330	Lucy.....	"	11	Theophile Maillet.....	Little River.....	4	39 40
96779	Majestic.....	"	12	C. Robin, Collas Co.....	Eastern Hbr.....	5	47 50
96771	Marie.....	"	10	Jno. Roach.....	"	4	38 40
96777	Marie Joseph.....	"	11	Jno. F. Poirier.....	Little River.....	5	46 50
103314	Mary.....	"	10	Peter Fiset.....	Eastern Hbr.....	4	38 40
96769	Mary Lambert.....	"	19	Chas. L. Chiasson.....	Little River.....	3	40 30
69125	Maryflower.....	Halifax.....	20	H. Chiasson.....	"	5	55 50
103326	Mizpah.....	Pt. Hawkesbury	10	Thos. Le Brun.....	Grand Etang.....	5	45 50
111792	Saint Aubin.....	"	15	C. Robin, Collas Co.....	Eastern Hbr.....	4	43 40
103329	Saint Helier.....	"	12	"	"	4	40 40
100448	Surprise.....	Canso.....	15	Daniel McDonnell.....	Judique.....	4	43 40
96773	Virgin.....	Pt. Hawkesbury	10	Michel Ramard.....	Little River.....	4	38 40
111793	Walla Walla.....	"	11	S. Bellefontaine.....	Eastern Hbr.....	4	39 40
96776	Willie B.....	"	21	"	"	6	63 60

LUNENBURG COUNTY.

111837	A. L. B.....	Lunenburg.....	22	Brenton Cleveland.....	Lunenburg.....	5	57 50
112126	Acadia.....	"	91	Alex. Knickle.....	"	17	200 70
116517	Acme.....	"	91	Wm. C. Smith.....	"	17	200 70
111641	Aguadilla.....	"	100	F. Anderson.....	"	17	200 70
107953	Ahava.....	"	85	W. C. Smith.....	"	16	193 60
107657	Alceae.....	"	99	Alex. Knickle.....	"	18	207 80
112115	Aldine.....	"	99	A. V. Conrad.....	Park's Creek.....	17	200 70
112107	Alexandra.....	"	93	F. Anderson.....	Lunenburg.....	17	200 70
111647	Alhambra.....	"	99	Wm. Gilfoy.....	"	18	207 80
112105	Alma Nelson.....	"	99	Christian Geldert.....	"	20	222 00
112101	Ambition.....	"	100	A. Himmelman.....	Rose Bay.....	19	214 90
116522	Anita.....	"	16	S. E. Winters.....	"	5	51 50
111750	Arabia.....	"	80	David Heisler.....	Lunenburg.....	17	200 70
116499	Arkansas.....	"	111	Jno. B. Young.....	"	17	200 70
112122	Atalaya.....	"	79	W. C. Smith.....	"	15	185 50
121870	Atlantic.....	"	81	Atlantic Fish Co.....	"	17	200 70
116498	Beatrice S. Mack.....	"	99	W. C. Smith.....	"	17	200 70
111734	Blake.....	"	99	J. N. Rafuse.....	Conquerall Bank.....	20	222 00
111732	Calavera.....	"	90	Henry Moser.....	Lunenburg.....	17	200 70
112128	Campania.....	"	99	Thos. Romkey.....	Riverport.....	18	207 80
112116	Cardinia.....	"	100	F. Anderson.....	Lunenburg.....	17	200 70
116505	Cavalier.....	"	70	W. N. Reinhardt.....	La Have.....	16	183 60
121999	Cavalier.....	"	13	Leroy Boliver.....	Broad Cove.....	4	41 40
107122	Collector.....	"	99	W. N. Reinhardt.....	La Have.....	17	200 70
111702	Colonia.....	"	98	A. H. Zwicker.....	Lunenburg.....	18	207 80
103759	Columbia.....	"	99	"	"	18	207 80
111743	Corean.....	"	70	J. N. Rafuse.....	Conquerall Bank.....	11	148 10
111736	Coronation.....	"	98	H. W. Adams.....	Lunenburg.....	18	207 80
111708	Crofton McLeod.....	"	85	Jno. W. McLean.....	Mahone Bay.....	15	186 50
111637	Cyril.....	"	100	Thos. A. Wilson.....	Bridgewater.....	21	229 10
111405	Deeta M.....	"	81	Jno. McLean.....	Mahone Bay.....	12	165 20
111711	Defender.....	"	98	Alex. Knickle.....	Lunenburg.....	17	200 70

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List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*LUNENBURG COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
111710	Demering.....	Lunenburg.....	85	Jessen Anderson....	Lunenburg..	17	200 70
116540	Douglas Adams...	"	99	H. W. Adams.....	"	18	207 80
116506	E. M. Zellars.....	"	84	Henry Moser.....	"	19	214 90
111730	Earle V. S.....	"	100	Howard Whynacht..	"	17	200 70
121866	Eldora.....	"	79	Amiel Corkum.....	E. M. La Have.	17	199 70
112099	Electro.....	"	88	E. B. Walters.....	La Have.....	20	222 00
83308	Ella.....	Liverpool.....	10	J. C. Hanson.....	Mahone Bay...	1	17 10
121994	Ella Mason.....	Lunenburg.....	74	Isaac Mason.....	Lunenburg..	19	208 90
107127	Ellen L. Maxner...	"	93	Lewis A. Hirtle....	"	16	193 60
121992	Emma H.....	"	71	Abraham Ernst....	Mahone Bay...	5	106 50
112087	Ethel.....	"	99	W. N. Reinhardt...	La Have.....	19	214 90
116518	Eva June.....	"	93	W. C. Smith.....	Lunenburg..	17	200 70
116520	Evelyn.....	"	18	Albert Meisner....	"	3	39 30
103743	Flo F. Mader.....	"	100	C. U. Mader.....	Mahone Bay...	17	200 70
116531	Florence B. W....	"	24	Simon Westaver...	Fox Point.....	5	59 50
111401	Frances Willard...	"	97	Jas. A. Hirtle....	Lunenburg..	14	179 40
111746	Fredonia.....	"	92	C. U. Mader.....	Mahone Bay...	12	165 20
107289	G. S. Troop.....	"	99	L. B. Currie.....	West Dublin...	17	200 70
116525	Gatherer.....	"	15	W. C. Smith.....	Lunenburg..	4	43 40
121851	Gladys B. Smith...	"	100	"	"	20	222 00
121867	Gladys F.....	"	72	J. N. Rafuse.....	Conquerall Bank	18	199 80
111742	Glenwood.....	"	99	David Heisler....	Lunenburg..	18	207 80
103752	Glyndon.....	"	99	James Romkey....	L. La Have....	17	200 70
116527	Guide.....	"	73	W. N. Reinhardt...	La Have.....	16	185 60
112111	Havana.....	"	100	A. V. Conrad.....	Park's Creek...	17	200 70
121863	Hazel.....	"	71	J. Publicover....	Getson's Cove..	16	184 60
116442	Helen C. Morse...	"	98	Jno. Westhaver...	Lunenburg..	18	207 80
121857	Hiawatha.....	"	99	W. C. Smith.....	"	18	207 80
121993	Hilda M. Backman.	"	81	Willet Conrad....	Rose Bay.....	17	200 70
112109	Hispaniola.....	"	91	Adam Knickle....	Lunenburg..	18	207 80
103174	Iona.....	Shelburne	15	Norman Chandler...	Chester.....	1	22 10
107956	Iona.....	Lunenburg	98	Stephen Oxner....	Riverport....	17	200 70
112089	Iona W.....	"	78	Abraham Ernst....	Mahone Bay...	14	177 40
107116	Ivy.....	"	12	Daniel Wentzel...	Pleasantville...	1	19 10
107960	J. W. Mills.....	"	76	J. W. Mills.....	Mahone Bay...	13	168 30
121858	J. A. McLean.....	"	80	Aubrey Anderson...	Lunenburg..	14	179 40
116511	J. F. Norton.....	"	61	A. V. Conrad.....	Park's Creek...	13	153 30
111726	Juanita.....	"	100	W. C. Smith.....	Lunenburg..	17	200 70
116509	Kasaga.....	"	59	James Bell.....	Dublin Shore...	14	158 40
111404	Kimberley.....	"	92	C. U. Mader.....	Mahone Bay...	10	151 00
111635	Latooka.....	"	99	A. V. Conrad.....	Park's Creek...	17	200 70
107126	Lena F. Oxner....	"	99	James Geldert....	Lunenburg..	18	207 80
107660	Lila D. Young....	"	100	Jno. B. Young....	"	17	200 70
107129	Lilla B. Hirtle...	"	99	Aubrey Anderson...	"	17	200 70
103760	Lillian.....	"	84	A. R. Morash.....	"	17	200 70
111634	Loyal.....	"	99	Abraham Ernst....	Mahone Bay...	17	200 70
111735	Lucania.....	"	99	Jno. Creaser.....	Riverport....	18	207 80
107120	Madeira.....	"	99	T. Creaser.....	"	18	207 80
112112	Maimie Dell.....	"	98	C. U. Mader.....	Mahone Bay...	17	200 70
116523	Mankato.....	"	76	Stannage Walters...	La Have.....	17	196 70
116538	Maple Leaf.....	"	26	J. M. Rhodenizer...	Lunenburg..	6	68 60
116519	Margaret E. Schwartz.....	"	98	Jno. Schwartz....	"	18	207 80
121862	Marina.....	"	78	Wm. Schmeisser...	E. M. La Have.	17	198 70
111709	Mariner.....	"	100	B. J. Gaul.....	Getson's Point..	17	200 70
121119	Mary E. Smith....	"	99	W. C. Smith.....	Lunenburg..	17	200 70
121859	Mary W. S.....	"	74	A. V. Conrad.....	Park's Creek...	12	159 20
121854	Mattawa.....	"	96	A. H. Zwicker....	Lunenburg..	18	207 80
107967	May Myree.....	"	89	Elias Richard, sr...	Getson's Cove..	21	229 10
121861	Medina A.....	"	74	Amiel Corkum.....	La Have.....	16	187 60
112100	Meteor.....	"	99	T. Creaser.....	Riverport....	17	200 70
121864	Mildred M. Bell...	"	54	Wm. Richard.....	Getson's Cove..	16	167 60

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Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
121865	Millie Louise.....	Lunenburg.....	80	Abraham Ernst.....	Mahone Bay.....	16	193 60
107952	Minnie M. Cook.....	".....	84	W. C. Smith.....	Lunenburg.....	18	207 80
116503	Minnie Pearl.....	".....	97	Thos. Hamm.....	".....	17	200 70
111701	Mizpah.....	".....	100	Martin Westhaver.....	".....	15	186 50
116535	Montana.....	".....	85	J. Alex Silver.....	".....	18	207 80
111645	Moran.....	".....	100	Daniel Getson.....	Getson's Cove.....	17	200 70
100606	Myra Louise.....	".....	17	Armenious Strun.....	Mahone Bay.....	5	52 50
116530	Nahada.....	".....	94	H. Whynacht.....	Lunenburg.....	16	193 60
112104	Nina.....	".....	10	Jno. Geldert.....	".....	1	17 10
116502	Oceanic.....	".....	99	Daniel Lohnes.....	Riverport.....	17	200 70
116500	Oreda.....	".....	16	Henry Selig.....	Vogler's Cove.....	3	37 30
112106	Oregon.....	".....	99	Stephen Oxner.....	Riverport.....	17	200 70
112120	Oressa Belle.....	".....	95	Peter B. Zwicker.....	Mahone Bay.....	16	193 60
112124	Palanda.....	".....	78	C. U. Mader.....	".....	15	184 50
111642	Palatia.....	".....	95	Chas. L. Silver.....	Lunenburg.....	18	207 80
111725	Palmetto.....	".....	98	Chas. Smith.....	".....	16	193 60
112113	Parana.....	".....	99	Daniel Lohnes.....	Riverport.....	17	200 70
121869	Petite.....	".....	61	Jno. D. Sperry.....	Petite Riviere.....	11	139 10
111417	Pilgrim.....	".....	99	Thos. A. Wilson.....	Bridgewater.....	17	200 70
111402	Protector.....	".....	95	Jos. L. Wilson.....	".....	17	200 70
107653	Renown.....	".....	83	W. C. Smith.....	Lunenburg.....	17	200 70
111648	Riviera.....	".....	96	Jas. H. Shankle.....	E. M. La Have.....	21	229 10
107125	Roma.....	".....	99	J. D. Myra.....	Riverport.....	17	200 70
121856	Ronald G. Smith.....	".....	100	W. C. Smith.....	Lunenburg.....	19	214 90
121991	Rupert.....	".....	78	J. N. Rafuse.....	Conquerall Bank.....	17	198 70
111741	Saratoga.....	".....	92	C. U. Mader.....	Mahone Bay.....	17	200 70
116529	Scotia.....	".....	78	Adnah Burns.....	Dayspring.....	17	198 70
107963	Shamrock.....	".....	89	Freeman Anderson.....	Lunenburg.....	17	200 70
111407	Strathcona.....	".....	89	".....	".....	17	200 70
116532	Togo.....	".....	14	Randolph Stevens.....	Tancook Isld.....	3	35 30
107651	Torata.....	".....	92	J. H. Wilson.....	Lunenburg.....	18	207 80
111733	Transvaal.....	".....	79	W. C. Smith.....	".....	16	192 60
112114	Tribune.....	".....	22	A. R. Morash.....	".....	4	50 40
112117	Ulva.....	".....	99	A. V. Conrad.....	Park's Creek.....	4	108 40
107957	Ungava.....	".....	88	Wm. Cleversey.....	Pleasantville.....	20	222 00
116510	Uranus.....	".....	90	W. C. Smith.....	Lunenburg.....	17	200 70
121868	Utowana.....	".....	71	J. N. Rafuse.....	Conquerall Bank.....	16	184 60
116504	W. C. Silver.....	".....	97	Kenneth Silver.....	Dayspring.....	20	222 00
111649	W. S. Wynot.....	".....	100	C. U. Mader.....	Mahone Bay.....	18	207 80
61904	Water Lily.....	Liverpool.....	14	Joseph Keddy.....	Martin's River.....	2	28 20
121852	Winnifred.....	Lunenburg.....	99	Abraham Ernst.....	Mahone Bay.....	19	214 90
112127	Yamaska.....	".....	98	Peter B. Zwicker.....	".....	15	186 50
111419	Yukon.....	".....	97	Elijah Ritcey.....	Riverport.....	17	200 70
122000	Zoraya.....	".....	16	Chas. Levy.....	Lt. Tancook Isld.....	4	44 40

PICTOU COUNTY.

107330	Gertie M. Star.....	Halifax.....	16	Peter Roberts.....	Pictou.....	2	30 20
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QUEEN'S COUNTY.

73969	Bertha E	Halifax.....	21	Wm. H. Doggett ..	White Point....	4	49 40
111583	Louisa A.....	Liverpool.....	10	Walter Fraser.....	Port Mouton...	4	38 40
116919	Madeline.....	".....	16	Grafton Godfrey ..	Brooklyn.....	5	51 50
116915	Maggie & Esther..	".....	11	Reuben J. Colp.....	Port Mouton...	5	46 50
92568	Mary Kate.....	Shelburne.....	13	Herbert Fisher.....	S. W. P. Mouton	3	34 30
116351	Percy Roy.....	Port Medway...	99	J. F. Wolfe.....	Port Medway...	19	214 90
100608	Vesper.....	Shelburne.....	14	Robt. Williams.....	S. W. P. Mouton	4	42 40

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LIST OF Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

RICHMOND COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner. or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
107961	Ada Mildred.....	Pictou.....	99	Jas. Yorston.....	Pictou.....	19	214 90
117096	Alaska.....	Arichat.....	10	S. Sampson.....	St. Peters.....	3	31 30
116657	Alice M.....	Yarmouth.....	26	R. T. Boudrot.....	Petit de Grat.....	10	97 00
88456	Alice May.....	Arichat.....	39	Wm. I. Le Vesconte.....	River Bourgeois.....	6	81 60
116344	Annie B.M.....	".....	18	W. Mombourquette.....	L'Ardoise West.....	6	60 60
103463	Annie May.....	".....	11	Jno. Langley.....	Strait Canso.....	3	32 30
111472	Annie May.....	".....	17	Jas. Mombourquette.....	Rockdale.....	5	52 50
38501	B. Weir & Co.....	".....	25	Ephraim Gerard.....	W. Arichat.....	2	39 20
75561	Boreas.....	Lunenburg.....	41	Jno. A. Colford.....	Port Richmond.....	4	69 40
72061	C. P. M.....	Arichat.....	22	Alex Burke.....	River Bourgeois.....	6	64 60
74100	Candid.....	".....	23	Desiré Burke.....	".....	6	65 60
96799	Catherine A.C.....	Halifax.....	17	Victor Poirier.....	Descousse.....	7	66 70
59484	Dayspring.....	".....	36	Andrew Fougere.....	River Bourgeois.....	10	107 00
116343	Eva May.....	Arichat.....	11	Thos. A. Boudrot.....	Petit de Grat.....	5	46 50
112380	Florence M.....	".....	24	A. Mombourquette.....	L'Ardoise West.....	5	59 50
116348	Florence M.....	".....	16	Wm. Martell.....	Petit de Grat.....	5	51 50
97046	Fredona.....	Liverpool.....	12	Wm. Lejeune.....	Port Royal.....	3	33 30
90436	Genesta.....	Barrington.....	32	J. A. Walker.....	Basin R. I.....	4	60 40
88599	Guide.....	Arichat.....	38	Edward Poirier.....	L. Descousse.....	12	123 20
117049	H. C. Phillips.....	Barrington.....	11	James Kehoe.....	Arichat.....	4	39 40
100161	Hilda Maud.....	Pt. Hawkesbury.....	46	Jno. D. Malcolm.....	Port Malcolm.....	5	81 50
111476	Indianna.....	Arichat.....	11	Jas. Wilkie.....	Arichat.....	4	39 40
100490	Irene M. B.....	Lunenburg.....	66	Fredk Poirier.....	Descousse.....	15	172 50
103458	K. McKenzie.....	Arichat.....	17	Wm. P. Groom.....	Grand Greve.....	3	38 30
103469	Katie B.....	".....	16	John Burke.....	River Bourgeois.....	5	51 50
111480	Lady Laurier.....	Arichat.....	12	Simon A. Boudrot.....	Petit de Grat.....	4	40 40
117092	Lass of Gowrie.....	".....	14	Joseph Petitpas.....	Arichat.....	4	42 40
107374	Leah Hardy.....	Sydney.....	20	Peter Landry.....	St. Peters.....	6	62 60
111905	Lena Jane.....	Arichat.....	11	Dominic Boudrot.....	Petit de Grat.....	6	53 60
111901	Lillian Louise.....	".....	12	Chas. P. Boudrot.....	".....	5	47 50
103467	Lizzie May.....	".....	12	Alfred Boudrot.....	".....	7	61 70
116349	Lorina.....	".....	18	Simon Landry.....	River Bourgeois.....	5	53 50
72071	Lumen Diei.....	".....	20	Urban Sampson.....	".....	4	48 40
116350	Maggie F.....	".....	15	Patrick Fougere.....	".....	5	50 50
107995	Maggie M. F.....	Canso.....	15	Daniel Pate.....	Petit de Grat.....	6	57 60
103532	Maria A.....	Halifax.....	22	John Walker.....	Basin R. I.....	4	50 40
107769	Martha B.....	Charlottetown.....	19	Colin E. Matheson.....	Grand River.....	2	33 20
116345	Mary Alice.....	Arichat.....	10	Pat. E. Sampson.....	L'Ardoise.....	4	38 40
111479	Mary Atalanta.....	".....	15	Peter Bouchard.....	River Bourgeois.....	5	50 50
116342	Mary Elda.....	".....	10	Alex. Landry et al.....	".....	2	24 20
116881	Mary M.....	".....	21	Alex. Martell.....	L'Ardoise.....	4	49 40
103462	Maud.....	".....	20	Henry Duyon.....	Arichat.....	3	41 30
72067	Minnie.....	Pt. Hawkesbury.....	26	John Pelham.....	Janvrin Isld.....	6	168 60
111907	Minnie A.....	Arichat.....	46	Anselm Sampson.....	River Bourgeois.....	10	17 00
111904	Minnie L.....	".....	15	Elias Bois.....	Petit de Grat.....	4	143 40
74355	Nova Stella.....	".....	53	L. N. Poirier.....	Descousse.....	15	59 50
84018	Ocean Bride.....	Halifax.....	23	Henry Richard.....	Arichat.....	2	37 20
65612	Oresa.....	".....	14	Jno. F. Proctor.....	Port Malcolm.....	1	21 10
100231	Pearl.....	".....	17	R. Dugas.....	W. Arichat.....	3	38 30
92571	Primrose.....	".....	14	Elias V. Landry.....	Petit de Grat.....	6	56 60
88504	Quickstep.....	Sydney.....	15	Thos. Hureau.....	Cape August.....	6	57 60
117095	Rodrig Grace.....	Arichat.....	17	Hubert Barrett.....	L'Ardoise.....	3	38 30
116889	Saint Dominique.....	".....	21	Lawrence Marchand.....	Petit de Grat.....	6	63 60
111903	Stella.....	".....	14	Camille Bouchie.....	River Bourgeois.....	4	142 40
116888	Swanild.....	".....	52	Wm. I. Le Vesconte.....	".....	11	30 10
92599	Thistle.....	Sydney.....	11	Chas. G. Boudrot.....	Petit de Grat.....	4	39 40
103460	Two Brothers.....	Arichat.....	18	Geo. Peters.....	L'Ardoise.....	7	167 70
100575	Tyler.....	".....	54	Chas. Boudrot.....	River Bourgeois.....	14	53 40
111794	Volunteer.....	Pt. Hawkesbury.....	14	David A. Boudrot.....	Petit de Grat.....	6	56 60
116292	Wilena Fraser.....	Charlottetown.....	13	Wm. W. Carrigan.....	Janvrin Isld.....	3	34 30

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LIST OF Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

SHELBURNE COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
121808	Abbie.	Yarmouth.	10	Clifford Atkinson.	Clam Point.	4	38 40
121802	Abbie May.	Barrington.	10	Wm. E. Atkinson.	N. E. Point.	3	31 30
116900	Ada & Pearl.	Yarmouth.	13	Jno. T. Duncan.	Clark's Harbour.	2	27 20
122096	Alfreda.	"	11	Peter Nickerson.	"	5	46 50
121801	Alice M. Atwood.	"	10	David A. Atwood.	Hawk.	3	31 30
122133	Alter C.	"	10	Jno. Y. Smith.	Baccaro.	4	38 40
100617	Altona.	Shelburne.	28	Wm. McMillan.	Lockeport.	7	77 70
117134	Annie Lue.	Yarmouth.	10	Jas. M. Crowell.	Smithville.	3	31 30
121890	Annie Smith.	"	13	Wm. L. Smith.	Baccaro.	5	48 50
100612	Ardella.	Shelburne.	10	Eleazer Crowe.	Sandy Point.	3	31 30
116824	Avis Pauline.	Barrington.	12	W. Kenney.	Clark's Harbour.	3	33 30
116828	Beatrice.	"	12	Frank Swim.	"	4	40 40
122102	Bernice N.	Yarmouth.	10	Jno. C. Nickerson.	Wood's Harbour.	4	38 40
116855	Blanche.	Shelburne.	12	John Matthews.	Lockeport.	5	47 50
121806	Blanche.	Yarmouth.	10	Alex. Nickerson.	Wood's Harbour.	3	31 30
103186	Brittania.	Shelburne.	11	Ross Enslow.	W. Green Hbr.	4	39 40
121654	Charles E.	Yarmouth.	13	E. Larkin.	Emerald Isle.	3	34 30
96970	Charlie Richardson.	Shelburne.	26	Wm. Hardy.	Allendale.	8	82 80
122094	Clara M. Smith.	Yarmouth.	10	Fredk. C. Smith.	Newellton.	4	38 40
116826	Claremont A.	Barrington.	11	Samuel Penney.	Clark's Harbour.	4	39 40
116891	Claude B. Daley.	"	25	E. V. Smith.	Port la Tour.	8	81 80
121681	Claymore.	Yarmouth.	10	D. A. Gardiner.	Clark's Harbour.	3	31 30
94942	Coronilla.	Shelburne.	27	Geo. L. Banks.	Barrington Pass.	11	105 10
121683	D. E. Nickerson.	Yarmouth.	10	Job. E. Nickerson.	Clark's Harbour.	3	31 30
107057	Dollie Varden.	Barrington.	10	Jas. W. Smith.	Shag Harbour.	3	31 30
121882	Dorothy.	Yarmouth.	10	Percy O. Smith.	Baccaro.	4	38 40
121906	E. C. Francis.	Barrington.	12	Byron H. Smith.	West Head.	4	40 40
121791	Eddie C.	Yarmouth.	10	Chas. D. Cook.	Up. Pt. La Tour.	4	38 40
116830	Edith Pauline.	Barrington.	10	R. C. Swim.	Clark's Hbr.	3	31 30
121884	Emma B.	Yarmouth.	10	Walter S. Ross.	Stoney Isld.	3	31 30
107332	Estel.	"	15	Jas. C. Sears.	Woods Hbr.	5	50 50
121688	Ethel May.	"	10	S. Messenger, Sr.	West Head.	6	52 60
112137	Etta M.	"	10	C. Kendrick.	Shag Hbr.	2	24 20
121796	Etta N.	"	10	A. Messenger.	Newellton.	3	31 30
103795	Etta Vaughan.	Shelburne.	98	B. P. Thorbourn.	Sandy Point.	22	236 20
121901	Eva M.	Barrington.	11	Byron Swim.	Clark's Hbr.	4	39 40
117048	Evangeline.	"	11	Foster Crowell.	"	2	25 20
107054	Favorite.	"	28	David S. Slate.	Cape Negro.	9	91 90
121804	Fish Hawk.	Yarmouth.	10	James Lowe.	Clark's Hbr.	2	24 20
122106	Florence M.	"	10	Jno. E. Nickerson.	West Head.	3	31 30
107350	Forrester.	Shelburne.	23	J. E. Pennington.	Sandy Point.	8	79 80
117045	Fred C.	Barrington.	12	Moses G. Smith.	West Head.	4	40 40
121907	Freda N. Nickerson.	"	12	P. W. Nickerson.	Clam Point.	4	40 40
121697	Freddie M.	Yarmouth.	10	N. Crowell.	Clark's Hbr.	2	24 20
121793	Fredena.	"	10	S. Hopkins.	"	4	38 40
117041	Genevive.	Barrington.	11	D. H. Flemming.	Cape Negro.	5	46 50
122142	Gertrude.	Yarmouth.	10	Geo. M. Forbes.	Forbes Point.	2	24 20
112138	Gladiator.	Shelburne.	11	H. N. Enslow.	McNutt's Isld.	2	25 20
116827	Gladys.	Barrington.	12	Benj. L. Goodwin.	N.E. Point.	4	40 40
111683	Greenwood.	Shelburne.	71	E. P. Greenwood.	N.E. Harbour.	15	177 50
121797	Hattie and Ina.	Yarmouth.	10	Arthur H. Perry.	N.W. Harbour.	4	38 40
121805	Hattie Quinlen.	"	10	Wm. L. Quinlen.	Clark's Hbr.	4	38 40
122139	Hazel.	"	10	D. E. Watkins.	Atwoods Brook.	4	38 40
122100	Helen C.	"	10	N. Crowell.	Woods Hbr.	3	31 30
107060	Herald.	Barrington.	42	Paul E. Crowell.	Barrington Pass.	8	98 80
122141	Hillside.	Yarmouth.	10	S. L. Nickerson.	Forbes Point.	1	17 10
111687	Ida M. Clarke.	Shelburne.	99	Wm. McMillan.	Lockeport.	22	236 20
117131	Ilna & Ida.	Barrington.	13	Wm. Madden.	Baccaro.	5	48 50
121904	Iona & Maggie.	"	11	Whitman Ross.	Stoney Island.	4	39 40
116853	J. J. Cox.	Shelburne.	65	R. L. McCarthy.	Shelburne.	10	136 00
116822	Jannet.	Barrington.	11	Thos. A. Kenney.	Clark's Hbr.	4	39 40
122138	Jennie L.	Yarmouth.	10	Jas. A. Smith.	Port La Tour.	4	38 40

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List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Continued.*SHELBURNE COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
117133	Jennie Roy	Yarmouth	10	Leslie Smith	Baccaro	4	38 40
116823	Jessie Roy	Barrington	11	Job A. Crowell	Clark's Hbr	4	39 40
121692	Josephine	Yarmouth	10	Fredk. N. Newell	West Head	3	31 30
122131	Katie M.	"	10	C. Reynolds	Baccara	3	31 30
121798	Kenneth S.	"	10	Geo. H. Smith	Clark's Hbr	3	31 30
107981	Kestrel	Shelburne	99	Geo. A. Cox	Shelburne	22	236 20
121889	Kuroki	Yarmouth	10	J. A. Newell	Newellton	4	38 40
94661	L. C. Tough	Shelburne	12	E. H. Swaine	Blanche	6	54 60
100329	La Rose	Yarmouth	13	Noah Abbott	Forbes Point	4	41 40
117136	Laura B.	"	10	Hayzen Lowe	Clark's Hbr	3	31 30
117140	Laura E.	"	10	O. T. Reynolds	Up. Pt. La Tour	4	38 40
121887	Lena	"	11	Avert D. Smith	Newellton	3	32 30
121693	Little Charley	"	10	Howard Newell	West Head	3	31 30
122105	Lottie G.	"	10	V. Brannen	Woods Hbr.	3	31 30
122098	Louise	"	10	D. H. Langthorn	"	3	31 30
121903	M. F. Atwood	Barrington	15	Wm. D. Atwood	Clark's Hbr		15 00
103796	Mabel Denvers	Shelburne	14	Jno. H. Reynolds	Reynoldscroft.	4	42 40
121880	Mabel C.	Yarmouth	20	Angus Nickerson	Stoney Isld.	3	31 30
122140	Mabel L.	"	10	Harry Banks	Shag Hbr.	2	24 20
121799	Mabel V.	"	10	Daniel V. Smith	Clark's Hbr.	2	24 20
116829	Maple Leaf	Barrington	11	Henry Penney	South Side	5	46 50
121888	Margaret	Yarmouth	10	I. S. Newell	West Head	2	24 20
116854	Mariana	Shelburne	33	Austin Swansburg	Little Hbr.	10	104 00
121803	Mary J.	Yarmouth	10	Mark Atwood	Hawk	3	31 30
83484	Mary May	Shelburne	20	Adam Firth	Shelburne	4	48 40
121879	Matilda	Yarmouth	10	E. P. Crowell	Port La Tour	2	24 20
117043	Mattie and Charlie	Barrington	10	Cyrus Nickerson	Clark's Hbr.	3	31 30
103057	Mayflower	Yarmouth	12	Albert Crowell	Lockeport	5	47 50
121794	Mooweena	Yarmouth	10	B. C. Crowell	Port La Tour	3	31 30
122103	Muriel S.	"	10	Thos. Symonds	Clark's Hbr.	4	38 40
103800	Nellie I. King	Shelburne	99	Geo. H. King	Sandy Point	22	236 20
117132	Nema D.	Barrington	10	Jas. C. Brannen	Baccaro	4	38 40
122136	Nyctia	Yarmouth	10	Edgar Adams	Shag Hbr.	4	38 40
121689	Ocean Belle	"	10	Benj. Newell	West Head	4	38 40
122104	Ocean Spray	"	11	Chas. E. Atkinson	Newellton	3	32 30
117050	Olive R.	Barrington	12	H. B. Swim	Lockeport	5	47 50
121893	Orinoco	Shelburne	15	Jas. Benham	"	4	43 40
121682	Quick Step	Yarmouth	10	C. Maxwell	Clark's Hbr.	3	31 30
121881	R. G. Hervey	"	13	Alex. Phillips	"	3	34 30
117044	S. B. Millard	Barrington	20	Jos. M. Symonds	"	6	62 60
121684	Seaton L.	Yarmouth	11	N. Smith	"	3	32 30
122108	Seretha	"	10	S. N. Atkinson	Newellton	3	31 30
116860	Stella	Shelburne	77	Churchill Locke	Lockeport	16	190 60
107990	Terence C. Lock- wood	"	98	Wm. McMillan	"	22	236 20
117139	Thalia D.	Yarmouth	10	Andrew Duncan	Clark's Hbr.	4	38 40
116895	Thelma E.	"	11	D. E. Cunningham	Hawk	4	39 40
122091	Thistle	"	10	Robt. H. Brannen	Stoney Isld.	4	38 40
117046	Three Brothers	Barrington	13	Thos. J. Newell	West Head	5	48 50
116825	Three Sisters	"	11	Reuben Penney	N. E. Point	4	39 40
116448	Togo	Shelburne	18	E. C. Locke	Lockeport	6	60 60
121792	Two Sisters	Yarmouth	10	Sydney Stephens	Hawk	4	38 40
122107	Two Sisters	"	10	Bert. Chetwynd	Woods Hbr.	4	38 40
121699	Una	"	10	Wm. C. Nickerson	West Head	2	24 20
103716	Valkyrie	"	11	Orman Garron	Shag Hbr.	5	46 50
121894	Vice Reine	Shelburne	12	Eleazer Penney	South Side	6	54 60
77744	Whip-poor-Will	"	17	Wm. P. Smith	N. W. Harbour	5	52 50
117042	White Eagle	Barrington	10	G. L. Nickerson	N. E. Point	1	38 40
121690	Winnifred	Yarmouth	10	Allan Nickerson	Clark's Hbr.	3	31 30
103183	Wren	Shelburne	22	Wm. McKay	Roseway	11	100 10
116449	Zephyr	"	11	Samuel Greenwood	Port Saxon	4	39 40
121656	Zilpha	Yarmouth	10	Martin Penney	South Side	4	38 40

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List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Continued.*

VICTORIA COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
117028	Anna F.	Sydney	14	Jas. Brewer	South Ingonish..	5	49 50
112388	Annie Amelia	"	13	Mathew Hawley	Ingonish Ferry ..	5	48 50
117030	Gertrude W.	"	16	Chas. Williams.....	South Ingonish..	5	51 50
107377	Maggie Ella.....	"	11	Wm. Thos. Donovan..	"	5	46 50
107355	Mary E.	"	10	Allan McIntyre.....	Ingonish Ferry..	5	45 50
100444	Stella May	Canso	12	Simon Hawley	"	6	54 60
117029	Two Brothers	Sydney	17	Vincent Williams....	South Ingonish..	5	52 50

YARMOUTH COUNTY.

121876	Adoriam	Yarmouth.....	15	Armand LeBlanc	Plymouth	3	36 30
122132	Aerolite	"	16	Jas. J. Duncan.....	Yarmouth	3	37 30
116898	Agnes M	"	11	I. Doucett	Tusket Wedge ..	4	39 40
122093	Anita.....	"	11	Benj. Bourque	Sluice Point	2	25 20
111879	Annie B.	"	20	Theodore D'Entremont	West Pubnico ..	8	76 80
121652	Arabia	"	10	E. J. LeBlanc	Tusket Wedge ..	3	31 30
121698	Argo	"	10	Mark Boudreau.....	Yarmouth	3	31 30
121695	Arona S.	"	10	J. J. D'Eon	West Pubnico ..	2	24 20
121635	Augusta.....	"	11	Leon D. Boudreau ..	Tusket Wedge ..	3	32 30
122109	Bella	"	18	Wm. Pothier.....	"	2	32 20
103187	Ben Bolt	"	91	Henry Lewis	Yarmouth	18	207 80
107053	Bonnie Lin	Barrington ..	10	Edgar Landers.....	Sandford.....	1	17 10
107338	C. M. B.	Yarmouth.....	10	J. C. McGray	Sand Beach	3	31 30
107346	Caddie	"	10	Jas. E. Perry	Port Maitland ..	4	38 40
121886	Carrie D.	"	10	Thos. Duncan.....	Yarmouth	3	31 30
122145	Cerita	"	10	Jno. C. Doucette.....	L. Tusket Wedge	3	31 30
116652	Champion	"	29	J. A. Crocker	Yarmouth	9	92 90
111836	Chevalier	Digby	11	Warren Sollows	Port Maitland ..	4	39 40
121694	Columbia	Yarmouth.....	10	N. S. Boudreau.....	Tusket Wedge ..	3	31 30
100605	Dawn	Barrington ..	49	Henry A. Amiro	West Pubnico ..	15	155 50
121686	Dora Lee	Yarmouth.....	10	Jno. P. Cotreau.....	Tusket Wedge ..	3	31 30
116205	Eddie James	"	79	Henry A. Amiro	West Pubnico ..	20	221 00
121800	Edessa	"	15	Geo. Michael.....	Sandford.....	2	29 20
112280	Edith L.	Digby	26	Jas. Adams	Port Maitland ..	6	68 60
121809	Estella	Yarmouth.....	11	Nicholas Pothier	Tusket Wedge ..	11	11 00
121883	Fanny Rose	"	15	Chas. E. Pothier	"	6	57 60
122095	Felton C.	"	16	R. B. Wyman.....	Arcadia	2	30 20
121874	Finettie May	"	12	J. A. Crocker	Yarmouth	5	47 50
122146	Flirt	"	16	Marc Boudreau.....	Tusket Wedge ..	5	51 50
94972	Florence.....	"	19	George Shaw	Sandford.....	5	54 50
121877	Florence C	"	15	Jno. L. Surette.....	Pinkney's Point ..	4	43 40
112282	Florence H.	"	20	Riley Haskell	Port Maitland ..	6	62 60
121872	Francis A.	"	93	Henry A. Amiro	West Pubnico ..	21	229 10
80798	Freddie G.	Digby	17	Alvin Webb	Port Maitland ..	6	59 60
117135	Fusiana	Yarmouth.....	12	H. T. Hines	Central Argyle ..	2	26 20
116207	Gabriel A.	"	17	T. Jacquard	Comeau's Hill ..	7	66 70
121885	Genesta	"	13	A. L. D'Entremont.....	Yarmouth	3	34 30
111876	Geneva May	"	72	Léonde Amiro	E. Pubnico.....	19	206 90
90885	Georgiana	"	90	Henry Lewis	Yarmouth	22	236 20
122092	Georgie M. Smith ..	"	13	Thos. E. Smith.....	"	4	41 40
117137	Gloriana	"	10	J. D. Boudreau.....	Tusket Wedge ..	3	31 30
107342	Harry C. Ellis	"	16	Arthur W. Smith.....	Yarmouth	3	37 30
116894	Harry M. Johnson ..	"	14	Chas. H. Crowell	"	3	35 30
103717	Henry L.	"	10	A. C. D'Entremont.....	West Pubnico ..	3	31 30
122099	Hilda	"	17	J. A. Boudreau.....	Tusket Wedge ..	4	45 40
121655	Indiana	"	10	Marc D. Boudreau.....	"	4	38 40
121795	John L.	"	11	F. L. Pothier.....	"	3	32 30
116204	Laurie J.	"	65	J. D'Entremont.....	West Pubnico ..	18	192 80

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List of Vessels which received Fishing Bounty, &c.—Nova Scotia—Con.

YARMOUTH COUNTY—Concluded.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid
							\$ cts.
59388	Letitia.	St. Andrews.	10	H. B. MacCormack.	Sandford.	4	38 40
103709	Lizzie E.	Yarmouth	19	E. Juston Ellis.	Port Maitland.	4	47 40
103718	Lucy.	"	10	A. F. D'Entremont.	West Pubnico.	3	31 30
121871	Ludivica.	"	11	H. T. LeBlanc.	Tusket Wedge.	4	39 40
116899	Lydia L.	"	14	Norman LeBlanc.	Plymouth	4	42 40
88596	M. A. Louis.	"	64	N. J. B. Tooker.	Yarmouth	20	206 00
116658	Mabel A.	"	15	Eben Frost.	Lit. River Hbr.	6	57 60
107605	Mabel M.	Weymouth	26	Edison Ellis.	Port Maitland.	6	62 60
103712	Marguerite	Yarmouth	10	H. Surette.	Tusket Wedge.	4	38 40
107337	Marguerite	"	57	L. D'Entremont.	West Pubnico.	16	170 60
121905	Mira L. Smith.	Barrington	14	T. F. Smith.	Yarmouth	3	35 30
111875	Nelson A.	Yarmouth	72	Henry A. Amiro.	West Pubnico.	20	214 00
103706	Regine	"	10	L. A. D'Entremont.	"	3	31 30
111521	Retta E.	Digby	10	Calvin Sollows.	Port Maitland.	4	38 40
121653	Royal.	Yarmouth	10	Geo. Boudreau.	Tusket Wedge.	3	31 30
88589	Sanford.	"	20	Wm. A. Killam.	Yarmouth		20 00
121878	Selma.	"	14	Leo Cotreau.	Tusket Wedge.	3	35 30
100323	Senora	Pubnico	85	Marc A. Surette.	West Pubnico.	21	229 10
116656	Silver Spray.	Yarmouth	11	C. O. Nickerson.	Yarmouth	4	39 40
100313	Souvenir.	"	71	G. H. D'Entremont.	West Pubnico.	20	213 00
121660	Squanto.	"	11	A. L. Doucette.	Tusket Wedge.	3	32 30
122135	10 U. S.	"	16	Wilson Rankin.	Arcadia	3	37 30
121875	Toronto.	"	13	Benj. C. Smith.	Yarmouth	4	41 40
122651	Valentina	"	10	S. LeBlanc.	Tusket Wedge.	4	38 40
103711	Venite	Digby	24	Jesse A. Ellis.	Yarmouth	7	73 70
122134	Venus	Yarmouth	10	L. P. Surette.	Tusket Wedge.	3	31 30
121659	Viola	"	10	J. LeBlanc.	"	1	17 10
121873	Viola S	"	16	Leander Surette.	Surette Isld.	6	58 60

PROVINCE OF NEW BRUNSWICK.

CHARLOTTE COUNTY.

116965	Admiral Togo.	St. Andrews.	12	Walter Benson.	Seal Cove.	3	33 30
107913	Arnold B.	"	10	H. H. Cheney.	White Head.	3	31 30
111557	Audley E.	"	19	S. R. Watt.	North Head.	5	54 50
107603	Augusta Evelyn.	St. John.	31	James Scovil.	"	9	94 90
83469	Austin P.	St. Andrews.	12	A. R. Phillips.	Campobello.	2	26 20
107903	Ava M.	"	17	Geo. A. Johnson.	Woodwards C've	4	45 40
111503	Bonnie Jean.	St. John.	12	Frank Ingersoll.	North Head.	1	19 10
103128	Britannia.	St. Andrews.	22	Mariner Calder et al.	Wilson's Beach.	4	50 40
107905	Centennial.	"	16	John F. Morse.	White Head.	3	37 30
106671	Dreadnaught	"	18	Frank Benson.	Seal Cove.	4	46 40
88253	E. B. Colwell.	St. John.	19	Robert Barry.	Beaver Hbr.	3	40 30
103114	Edward Morse.	St. Andrews.	32	Alex. Calder.	Welchpool.	10	103 00
103789	Effie B. Nickerson.	Shelburne	22	Alfred Stanley.	Flagg's Cove.	4	50 40
111522	Elizabeth.	Digby.	21	W. M. Kent.	Woodward's C've	4	49 40
80882	Ella Mabel.	St. Andrews.	14	Eldorado Lee.	Beaver Hbr.	2	28 20
107793	Ethel & Carrie.	St. John.	15	Scott Wooster.	Grand Hbr.	4	43 40
116675	Evangeline.	St. Andrews.	15	Arthur Green.	Seal Cove.	4	43 40
80803	Exenia	Windsor.	18	Milton Cronk.	North Head.	6	60 60
100535	Fairplay.	Yarmouth	11	Luke Holmes.	Black's Hbr.	2	25 20
88276	Falcon.	St. Andrews.	12	Calvados Brown.	Wilson's Beach.	2	26 20
103120	Falmouth.	"	10	A. B. Small.	Woodward's C've	3	31 30
111552	Flora B.	"	13	Nelson Ingersoll.	"	3	34 30
116968	Florence	"	18	J. F. Eldridge.	Beaver Hbr.	5	53 50
94835	Georgie Linwood.	Digby.	25	Jno. R. Moses.	North Head.	5	60 50
107916	Glenita C.	St. Andrews.	12	C. E. Guptill.	White Head.	3	33 30
107910	Grace & Ethel.	"	16	Robert Ingersoll.	Woodward's C've	5	51 50

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LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*CHARLOTTE COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts..
111839	Harry C.	Digby	16	Lewis Mathews.	Letete	3	37 30
83463	Havelock.	St. Andrews.	33	Wm. James.	Wilson's Beach.	4	61 40
116961	J. E. Garland.	"	72	Simon Brown.	"	3	93 30
116963	Jennie & Julia.	"	13	Jno. Carter.	Seeley's Cove.	5	48 50
103997	Jessie James.	"	11	J. Frankland.	White Head.	3	32 30
88273	Lillian C.	"	13	Jno. Seeley.	St. John.	7	62 70
59321	Little Nell.	"	21	Wm. McLellan.	Welchpool.	3	42 30
122042	Lyla H.	"	11	Owen Frankland.	White Head.	3	32 30
92514	Maggie Jane.	"	10	Harvey Cook.	Back Bay.	2	24 20
107479	Marguerite.	Digby	24	Frank McDonald.	Campobello.	4	52 40
107438	Minnie F.	St. Andrews.	11	Wm. A. Guptill.	Seal Cove.	3	32 30
116897	Myrtle S.	Yarmouth.	12	Henry Benson.	Seal Cove.	4	40 40
103705	Nebula.	"	24	Nathaniel Beal.	North Head.	5	59 50
122044	Oliva C.	St. Andrews.	26	Thomas Carter.	Seeley's Cove.	4	54 40
112311	Oronhyatekha.	"	21	James McLeese.	Back Bay.	5	56 50
92518	Peril.	"	18	Martin Eldridge.	Beaver Hbr.	1	25 10
103993	Pythian Knight.	"	19	Frank Ingersoll.	North Head.	5	54 50
107904	Quoddy Queen.	"	13	Hantford Small.	White Head.	5	48 50
107806	Rena F.	St. John.	12	John Ingersoll.	Woodward's C've	5	47 50
83253	Rescue.	Annapolis.	17	James Nesbitt.	North Head.	5	52 50
122043	Sea Foam.	St. Andrews.	14	M. C. Kent.	Seal Cove.	3	35 30
111556	She Said No.	"	11	John R. Moses.	North Head.	3	32 30
107433	Sir John.	"	11	Hiram Morse.	White Head.	4	39 40
116964	Tethys.	"	20	Geo. L. Johnson.	Leonardville.	2	34 20
88414	Trumpet.	St. John.	20	Geo. U. Wright.	Beaver Hbr.	3	41 30
103998	Try Again.	St. Andrews.	15	A. W. Ingersoll.	Woodward's C've	3	36 30
111555	Valkyrie.	"	16	L. C. Watt.	North Head.	4	44 40
116970	Vigilant.	"	12	W. Cossaboom.	White Head.	3	33 30
100548	Violetta.	Digby.	11	Albert Tucker.	Letete.	3	32 30
103111	Volunteer.	St. Andrews.	14	Geo. Ingersoll.	Woodward's C've	2	28 20
97149	Winnie.	"	12	Joseph Holland.	Seeley's Cove.	3	33 30
107917	Zelma.	"	17	Henry Frankland.	White Head.	5	52 50

GLOUCESTER COUNTY.

72099	Adelina.	Chatham.	12	Clement Lanteigne.	Lameque.	4	40 40
103009	Adeline Gladys.	"	12	P. Blanchard.	Caraget.	4	40 40
103081	Albatross.	"	13	W. Fruing & Co.	Shippegan.	4	41 40
112156	Albert W.	"	10	P. Chiasson.	Caraget.	4	38 40
97194	Alika.	"	12	Lange Paulin.	Lameque.	4	40 40
112162	Alma.	"	12	Agapit Duguay.	"	5	47 50
103763	Alouette.	"	10	Wm. Fruing & Co.	Shippegan.	4	38 40
92419	Anna.	"	12	A. D. Chiasson.	Lameque.	2	26 20
100960	Annie M.	"	11	W. S. Loggie Co.	Chatham.	4	39 40
96739	Argeline.	"	14	Octave Paulin.	Caraget.	5	49 50
103085	Argentina.	"	12	C. Robin, Collas Co.	"	4	40 40
100983	Bee.	"	11	Jas. Doucet.	"	4	39 40
61431	Bee.	"	11	Paul Noel.	Lameque.	4	39 40
103072	Ben Hur.	"	11	John Leclerc.	Caraget.	4	39 40
72079	Betsy.	"	13	Wm. Fruing & Co.	Shippegan.	4	41 40
100975	Big Bear.	"	10	F. T. B. Young.	Caraget.	3	31 30
116474	Blanchard.	"	12	Michael John.	"	4	40 40
100299	Blanchard.	"	12	C. Robin, Collas Co.	"	5	47 50
103589	Blenheim.	"	13	"	"	5	48 50
103780	Britannia.	"	13	Wm. Fruing & Co.	Shippegan.	4	41 40
100780	Britannic.	"	12	W. S. Loggie Co.	Chatham.	4	40 40
111465	C.R.C.	"	13	C. Robin, Collas Co.	Caraget.	4	41 40
100908	Caesar.	"	10	Philip Rive.	"	3	31 30
100774	Calliope.	"	12	"	"	3	33 30

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List of Vessels which received Fishing Bounty, &c.—New Brunswick—*Continued.*GLOUCESTER COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
103271	Celia.....	Chatham.....	11	D. Gallien.....	Caraquet.....	1	18 10
103585	Cerdrie.....	".....	14	P. Rive.....	".....	4	42 40
100784	Charlotte.....	".....	18	F. T. B. Young.....	".....	4	41 40
100789	Chazalie.....	".....	11	".....	".....	3	32 30
96730	Christina.....	".....	11	C. Robin, Collas Co.....	".....	3	32 30
101000	Condor.....	".....	10	Wm. Fruing & Co.....	Shippegan.....	4	38 40
103083	Corsair.....	".....	10	".....	".....	3	31 30
100916	Cygnnet.....	".....	12	C. Robin, Collas Co.....	Caraquet.....	3	33 30
100971	Cyprian.....	".....	10	J. O. Le Bouthillier.....	".....	4	38 40
100913	Daffodil.....	".....	10	Wm. Fruing & Co.....	Shippegan.....	3	31 30
100915	Dawn.....	".....	12	C. Robin, Collas Co.....	Caraquet.....	3	33 30
103076	Dipper.....	".....	12	W. S. Loggie Co.....	Chatham.....	4	40 40
103948	Dora.....	".....	12	C. Robin, Collas Co.....	Caraquet.....	3	33 30
112155	Dora.....	".....	10	Seraphin Doiron.....	Miscou.....	4	38 40
122053	Dorie.....	".....	10	F. Chiasson.....	Island River.....	4	38 40
100999	Dove.....	".....	11	Wm. Fruing & Co.....	Shippegan.....	4	39 40
100998	Eagle.....	".....	10	".....	".....	4	38 40
116979	Elie Anne.....	".....	17	X. X. Lanteigne.....	Caraquet.....	4	45 40
100293	Eliza.....	".....	15	F. T. B. Young.....	".....	4	43 40
103590	Eliza.....	".....	13	C. Robin, Collas Co.....	".....	4	41 40
100911	Emperor.....	".....	10	Wm. Fruing & Co.....	Shippegan.....	3	31 30
100786	Empress.....	".....	12	F. T. B. Young.....	Caraquet.....	3	33 30
103776	Esk.....	".....	14	".....	".....	4	42 40
100772	Estelle.....	".....	13	P. Rive.....	".....	3	34 30
100787	Ethel.....	".....	11	F. T. B. Young.....	".....	4	39 40
100905	Evangeline.....	".....	10	P. A. Lanteigne.....	".....	5	45 50
92417	Evangeline.....	".....	11	Maximin Paulin.....	L. Lameque.....	4	39 40
103001	Falcon.....	".....	10	Wm. Fruing & Co.....	Shippegan.....	4	38 40
103077	Fame.....	".....	10	Geo. D. Maillet.....	".....	4	38 40
100298	Fisher.....	".....	12	Hubert Paulin.....	L. Lameque.....	5	47 50
61445	Flavie.....	".....	13	Wm. Fruing & Co.....	Shippegan.....	4	41 40
111468	Fleetwing.....	".....	14	".....	".....	4	42 40
112165	Flying Cloud.....	".....	13	John Robichaud.....	".....	4	41 40
100782	Flying Foam.....	".....	12	F. T. B. Young.....	Caraquet.....	4	40 40
112151	Flying Foam.....	".....	18	C. Robin, Collas Co.....	".....	4	46 40
100912	Foam.....	".....	10	Jos. Z. Chiasson.....	".....	2	24 20
116479	Fortuna.....	".....	10	P. Boudreau.....	Mizonette.....	3	31 30
111467	Four Brothers.....	".....	13	P. S. Albert.....	Caraquet.....	4	41 40
100778	Gambetta.....	".....	13	W. S. Loggie Co.....	Chatham.....	4	41 40
111464	Gazelle.....	".....	13	C. Robin, Collas Co.....	Caraquet.....	4	41 40
100954	Gazelle.....	".....	10	W. S. Loggie Co.....	Chatham.....	5	45 50
100968	Gem.....	".....	11	C. Robin, Collas Co.....	Caraquet.....	4	39 40
96733	Gem.....	".....	12	Wm. Fruing & Co.....	Shippegan.....	4	40 40
103766	Genesta.....	".....	12	T. Poirier.....	Caraquet.....	3	33 30
116980	Georgina.....	".....	15	G. Duguay.....	L. Lameque.....	5	50 50
103282	Gilknockie.....	".....	11	F. T. B. Young.....	Caraquet.....	3	32 30
111848	Gipsy.....	".....	15	Wm. Fruing & Co.....	Shippegan.....	4	43 40
103086	Gipsy.....	".....	20	W. S. Loggie Co.....	Chatham.....	5	55 50
100964	Gladstone.....	".....	10	I. Lanteigne.....	Caraquet.....	4	38 40
100910	Gleaner.....	".....	12	Luke Lanteigne.....	".....	4	40 40
107775	Gold Seeker.....	".....	13	C. Robin, Collas Co.....	".....	3	34 30
112157	Grasshopper.....	".....	16	P. Rive.....	".....	3	37 30
92418	Grip.....	".....	12	Gustave Chenard.....	".....	4	40 40
100790	Guiding Star.....	".....	11	F. T. B. Young.....	".....	3	32 30
111849	Happy Home.....	".....	16	H. Le Bouthillier.....	".....	5	51 50
100956	Harold N.....	".....	12	P. Mallet.....	Shippegan.....	5	47 50
100994	Hercules.....	".....	10	P. M. Lanteigne.....	Caraquet.....	4	38 40
107771	Heron.....	".....	13	Wm. Fruing & Co.....	Shippegan.....	4	41 40
103765	Hirondelle.....	".....	11	Agapit Leclerc.....	Caraquet.....	4	39 40
61425	Hope.....	".....	13	Jos. V. Lanteigne.....	".....	4	41 40
100903	Hope.....	".....	12	F. T. B. Young.....	".....	4	40 40
103939	Hope.....	".....	11	Chas. Rail.....	L. Shippegan.....	4	39 40

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LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*GLOUCESTER COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
100906	Hotspur.....	Chatham.....	10	P. Rive.....	Caraquet.....	4	38 40
117181	Ida.....	".....	16	Jos. Savoy..	Lameque.....	5	51 50
103931	Irene.....	".....	12	Wm. Fruing & Co.	Shippegan.....	3	33 30
96724	Isabel.....	".....	11	Jean B. Hébert..	".....	5	46 50
103289	Jersey Lily.....	".....	12	Wm. Fruing & Co.	".....	3	33 30
100958	John B.....	".....	11	W. S. Loggie Co.	Chatham.....	4	39 40
100965	Josephine.....	".....	11	P. Rive.....	Caraquet.....	3	32 30
112169	Kathleen.....	".....	15	Wm. Fruing & Co.	Shippegan.....	4	43 40
111466	King Edward.....	".....	14	C. Robin, Collas Co.	Caraquet.....	5	49 50
103949	King Fisher.....	".....	13	Wm. Fruing & Co.	Shippegan.....	3	34 30
103288	Kite.....	".....	10	".....	".....	4	38 40
107774	Klondyke.....	".....	14	C. Robin, Collas Co.	Caraquet.....	4	42 40
103283	Koh-i-noor.....	".....	13	P. Rive.....	".....	3	34 30
111461	Ladysmith.....	".....	17	H. Chiasson..	L. Lameque.....	5	52 50
103003	Lark.....	".....	10	Wm. Fruing & Co.	Shippegan.....	3	31 30
107773	L'Etoile.....	".....	15	Prudent Gallien.	Caraquet.....	4	43 40
112152	Lillian.....	".....	15	C. Robin, Collas Co.	".....	4	43 40
100972	Lizzie D.....	".....	12	F. T. B. Young..	".....	3	33 30
100902	Lord Stanley.....	".....	10	Wm. Fruing & Co.	Shippegan.....	3	31 30
116977	Mabel.....	".....	15	W. S. Loggie Co.	Chatham.....	5	50 50
112154	Mac.....	".....	11	John M. Ward..	Miscou.....	5	46 50
116480	Maggie.....	".....	10	John Paulin.....	Caraquet.....	4	38 40
100955	Majestic.....	".....	10	W. S. Loggie Co.	Chatham.....	4	38 40
112158	Maple Leaf.....	".....	13	Wm. Fruing & Co.	Shippegan.....	4	41 40
107779	Marie.....	".....	15	Gaspard Savoie..	".....	4	43 40
72100	Marie.....	".....	11	Eugène Gauvin..	Lameque.....	4	39 40
103278	Marie Celia.....	".....	13	C. Robin, Collas Co.	Caraquet.....	5	48 50
117182	Marie Etoile.....	".....	20	Joseph A. Doiron.	".....	5	55 50
116978	Margaret.....	".....	16	W. S. Loggie Co.	Chatham.....	4	44 40
112163	Margaret Anne.....	".....	13	Jno. Jones.....	L. Lameque.....	4	41 40
100292	Marie Joseph.....	".....	12	Lazare Gauvin..	".....	4	40 40
100295	Marie Louisa.....	".....	18	J. A. Paulin.....	Caraquet.....	4	46 40
116471	Marie Louise.....	".....	10	Gustave Chiasson.	".....	3	31 30
111847	Mary.....	".....	14	David Albert.....	".....	4	42 40
103084	Mary Emma.....	".....	11	Wm. Fruing & Co.	Shippegan.....	3	32 30
92413	Mary Jane.....	".....	14	R. P. Doiron.....	Caraquet.....	5	49 50
116478	Mary O.....	".....	11	J. O. Cormier.....	Mizonette.....	3	32 30
100957	Mary R.....	".....	12	W. S. Loggie Co.	Chatham.....	4	40 40
116475	Mary Rose.....	".....	17	Wm. Cormier.....	Caraquet.....	6	59 60
112161	Mary Star.....	".....	15	H. Le Bouthillier.	".....	4	43 40
112150	Mary Star of the Sea	".....	15	Luc Friolet.....	".....	5	50 50
111844	Mary Star of the Sea	".....	14	C. Robin, Collas Co.	Caraquet.....	4	42 40
116477	Mary Star of the Sea	".....	20	Ferdinand Savoy..	Shippegan.....	3	48 40
103768	May Flower.....	".....	13	C. Robin, Collas Co.	Caraquet.....	3	34 30
107777	May Flower.....	".....	11	Octave Benoit.....	L. Lameque.....	5	46 50
111462	May Flower.....	".....	10	H. Kent.....	Miscou.....	4	38 40
100779	Mermaid.....	".....	11	W. S. Loggie Co.	Chatham.....	4	39 40
112164	Merry Christmas..	".....	13	Celestin Jean.....	L. Lameque.....	4	41 40
100300	Mikado.....	".....	13	C. Robin, Collas Co.	Caraquet.....	4	41 40
117188	Morning Star.....	".....	14	Romain Noel.....	Lameque.....	4	42 40
88669	Morning Star.....	".....	12	Gustave Gionet..	St. Rose.....	1	19 10
122052	Opal.....	".....	10	P. J. Chiasson..	Isld. River.....	4	38 40
103904	Oilole.....	".....	11	Wm. Fruing & Co.	Shippegan.....	3	32 30
103005	Osprey.....	".....	10	".....	".....	4	38 40
100904	P. T. S.....	".....	11	Hugh Lanteigne..	Caraquet.....	4	39 40
100297	Palma.....	".....	13	Amedee Ache.....	Lameque.....	4	41 40
100776	Patrick.....	".....	11	P. Rive.....	Caraquet.....	3	32 30
103778	Pelican.....	".....	13	Wm. Fruing & Co.	Shippegan.....	3	34 30
103674	Petrel.....	".....	12	".....	".....	3	33 30
116974	Providence.....	".....	18	Michel Lanteigne.	Caraquet.....	4	46 40
96740	Providence.....	".....	13	T. Le Bouthillier.	".....	5	48 50
72076	Providence.....	".....	12	Wm. Fruing & Co.	Shippegan.....	5	47 50

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List of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*GLOUCESTER COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
96732	Providence	Chatham	11	Wm. Fruing & Co.	Shippegan	5	46 50
100775	Redgauntlet	"	11	P. Rive	Caraget	3	32 30
100952	Replevin	"	10	C. Robin, Collas Co.	"	3	31 30
103078	Reward	"	13	Jas. De Grace	Shippegan	5	48 50
97191	Rita	"	12	C. Robin, Collas Co.	Caraget	4	40 40
111470	River Branch	"	11	Wm. Fruing & Co.	Shippegan	4	39 40
103946	Robin	"	12	C. Robin, Collas Co.	Caraget	4	40 40
103547	Romulus	"	18	W. S. Loggie Co.	Chatham	5	53 50
92404	Rosa	"	17	Fabien O. Ache	Lameque	4	45 40
100908	Rosalie	"	10	P. Rive	Caraget	2	24 20
100773	Rupert	"	12	"	"	4	40 40
74401	Sara	"	11	Wm. Doucet	"	4	39 40
100907	Sarah	"	10	F. T. B. Young	"	3	31 30
103010	Sarah B.	"	10	A. S. Lanteigne	"	5	45 50
117190	Saturn	"	10	D. Blanchard	Mizonette	5	45 50
103584	Saxon	"	13	P. Rive	Caraget	4	41 40
100959	Sea Bird	"	10	W. S. Loggie Co.	Chatham	4	38 40
100914	Sea Flower	"	11	C. Robin, Collas Co.	Caraget	3	32 30
100901	Sea Flower	"	12	F. T. B. Young	"	4	40 40
96731	Sea Star	"	13	Joseph Savoy	Shippegan	4	41 40
100961	Silver Moon	"	14	W. S. Loggie Co.	Chatham	4	42 40
100788	Sir Charles	"	11	F. T. B. Young	Caraget	3	32 30
100963	Stanley	"	10	P. Rive	"	2	24 20
103087	Stanley	"	10	Frank Baudin	Miscou	5	45 50
103767	Stella Maris	"	19	C. Robin, Collas Co.	Caraget	4	47 40
111845	Superior	"	14	"	"	4	42 40
103772	Surprise	"	10	Isaie Godin	Mizonette	3	31 30
103747	Swallow	"	13	C. Robin, Collas Co.	Caraget	4	41 40
103006	Swallow	"	11	Wm. Fruing & Co.	Shippegan	4	39 40
103762	Swan	"	14	"	"	6	56 60
100986	Swift	"	11	F. J. Chiasson	Isld. River	5	46 50
116473	St. Ann	"	14	Onesime Chiasson	Lameque	4	42 40
116972	St. André	"	15	Andre A. Ache	"	4	43 40
111469	St. John	"	13	John Aché	"	4	41 40
112167	St. Joseph	"	10	Raphael Gionet	Caraget	4	38 40
103008	St. Joseph	"	12	Adolphe Aché	Lameque	5	47 50
107776	St. Peter	"	12	"	"	5	40 40
117187	Ste. Anne	"	13	Jean P. Noel	"	5	48 50
117189	Ste. Cecelia	"	13	Gelase Aché	L. Lameque	5	48 50
122051	Ste. Julie	"	12	Octave P. Noel	Lameque	5	47 50
100777	Teutonic	"	11	W. S. Loggie Co.	Chatham	5	46 50
96738	Three Brothers	"	12	Jno. S. Albert	Caraget	4	40 40
117184	Three Brothers	"	15	D. Chiasson	Abraham Village	5	50 50
100918	Tickler	"	12	C. Robin, Collas Co.	Caraget	3	33 30
112159	United Empire	"	17	F. T. B. Young	"	4	45 40
103285	Valkyrie	"	12	P. Rive	"	4	40 40
103775	Victoria	"	16	W. S. Loggie Co.	Chatham	5	51 50
117183	Vina	"	14	Jacques Noel	Lameque	4	42 40
100995	Voltaire	"	10	P. Rive	Caraget	3	31 30
100966	Von Moltke	"	11	Peter J. Frigot	"	4	39 40
103588	Vulture	"	13	W. S. Loggie Co.	Chatham	4	41 40
100953	White Wings	"	10	F. T. B. Young	Caraget	4	38 40
100973	World's Fair	"	11	"	"	3	32 30
103079	Wren	"	11	Wm. Fruing & Co.	Shippegan	4	39 40
100920	Zephyr	"	12	C. Robin, Collas Co.	Caraget	4	40 40

KENT COUNTY.

116476	Mary Beatrice	Chatham	10	Julien Brauson	Buctouche	3	31 30
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List of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*

NORTHUMBERLAND COUNTY.

Official Number.	Names of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty Paid.
							\$ cts.
96725	Bessie T.	Chatham.....	10	Donald Loggie.	Burnt Church...	2	24 20
100969	John Bull.	"	10	Henry Albert.....	Lower Neguac...	3	31 30
88664	Lizzie D.	"	17	Beloni Harvey.....	"	5	52 50
92420	Mary Louise.	"	13	Donald Loggie.....	Burnt Church...	3	34 30

RESTIGOUCHE COUNTY.

94959	Winnie G. S.	Lunenburg.	26	Donald McGregor....	Dalhousie.....	4	54 40
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ST. JOHN COUNTY.

94698	Carrie H.	St. John.....	20	W. J. Wilson.	Lorneville.....	5	55 50
75757	Etta	Yarmouth.....	17	James McAfee.....	"	5	52 50
100156	Hustler	St. John.....	44	A. Thompson.....	Dipper Hbr....	3	65 30
77783	Lost Heir.	Port Medway...	15	R. Maguire, sr....	St. John	4	43 40
85442	Mystery.....	St. John.....	14	Fred'k Thompson...	Chance Hbr ...	4	42 40
103704	Whisper.....	Yarmouth.....	31	Chas. Harkins	Dipper Hbr....	4	59 40

PROVINCE OF PRINCE EDWARD ISLAND.

KING'S COUNTY.

71302	Alice.....	Charlottetown..	10	Jos. Tiernay	Souris.....	3	31 30
100445	Carrie O.	Canso	12	Edw'd Colbert.....	Beach Point ...	3	33 30
116294	Charlotte S.	Charlottetown..	14	Reuben Penny	Murray Hbr., Sth	2	28 20
66679	Diploma	Yarmouth.....	62	John Dicks.	Georgetown ...	3	83 30
75904	Empress	Charlottetown..	26	John Gosbee	Murray River...	4	54 40
116308	Francis D. Cook...	"	47	Reuben Cohoon.....	Beach Point...	5	82 50
122081	Frank	"	10	J. M. Cheverie.....	Souris.....	5	45 50
107759	Hustler	"	13	L. McNeill.....	Beach Point...	6	55 60
100696	Marion Emerson...	Pictou.	30	Wallace White.....	"	4	58 40
113022	Miantonomah.....	Charlottetown..	72	Edward Dicks.	Georgetown...	6	114 60
107751	Minnie Laura	"	31	Joseph White.....	Beach Point...	2	45 20
107985	Muriel	Shelburne	25	Silas Sencabaugh....	"	5	60 50
96770	O.L.B.	Pt. Hawkesbury	12	Chas. Gillam.....	Souris.....	3	33 30
116296	Outlook.....	Charlottetown..	21	Hugh Jackson.	Beach Point...	4	49 40
112125	Pearl.....	Lunenburg.....	14	Jno. A. McKenzie....	"	4	42 40
64869	Sarah L. Oxner....	Halifax.....	34	Edward Delorize....	Georgetown ...	3	55 30
107770	Success.....	Charlottetown..	15	Robert McKenzie....	Cable Head West	2	29 20

PRINCE COUNTY.

103279	Alice Maud.....	Chatham.....	10	F. Arseneault	Tignish.....	4	38 40
103507	Annie.....	Halifax.....	16	Joshua Hutt	Alberton.....	3	37 30
107758	Daisy.....	Charlottetown..	13	Daniel Fraser.....	"	5	48 50
103592	Rosamond.....	"	18	D. O. Champion	Baltic.....	4	46 40
94992	Sarah P. Ayer....	"	64	John Champion.....	Alberton.....	10	135 00
103193	Startle.....	Halifax.....	11	Alfred Genoit.....	Alberton.....	4	39 40
107760	Western Prince ..	Charlottetown..	10	Wallace Richards. ...	"	2	24 20

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List of Vessels which received Fishing Bounty, &c.—Prince Edward Island—*Con.*

QUEEN'S COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
92479	Fanny.....	Charlottetown...	26	Joseph Gallant.....	Rusticoville.....	12	111 20
107763	Guinea.....	".....	10	Boyce Harding.....	French River...	4	38 40
100580	Maggie E. C.....	Lunenburg.....	20	Jas. H. McLeod.....	".....	5	55 50
100474	R. Beatrice.....	Charlottetown...	19	J. Delaney.....	".....	4	47 50
122082	Sea View.....	".....	13	Stanford Pickering...	Sea view.....	2	27 20
42745	Surprise.....	".....	18	Frank Pidgeon.....	French River...	5	53 50
75895	Two Brothers.....	".....	26	Nectaire Peters.....	North Rustico...	12	111 20
88518	W. F. Elizabeth...	Sydney.....	10	Thos. Doyle.....	".....	5	45 50

PROVINCE OF QUEBEC.

GASPE COUNTY.

103318	Little Heir.....	Pt. Hawkesbury	19	Tim Larade.....	Amherst.....	5	54 50
88464	Mary E.....	Arichat.....	10	Nectaire Boudreau...	".....	5	45 50
85400	Minnie M.....	Magdalen Isld..	13	Honoré Cormier.....	".....	4	41 40
85399	Minnie May.....	".....	10	Wm. Boudreau.....	".....	4	38 40
111430	Shamrock.....	Halifax.....	23	Alfred Vigneau.....	".....	4	51 40
94675	Success.....	".....	16	R. J. Leslie & Co.	".....	4	44 40

SAGUENAY COUNTY.

103060	Edith M.....	Quebec.....	20	Zoel Jomphe.....	Seven Islds.....	5	55 50
75445	Phoenix.....	Gaspé.....	28	Ulric Gagné.....	Caribou Islds....	2	42 20

APPENDIX No. 2.

NOVA SCOTIA.

District No. 1—Comprising the four counties of the Island of Cape Breton.

Inspector A. C. Bertram, North Sydney.

District No. 2—Comprising the counties of Cumberland, Colchester, Pictou, Antigonish, Guysborough, Halifax and Hants.

Inspector Robert Hockin, Pictou.

District No. 3—Comprising the counties of King's, Annapolis, Digby, Yarmouth, Shelburne, Queen's and Lunenburg.

Inspector A. C. Robertson, Barrington Passage.

DISTRICT No. 1.

NORTH SYDNEY, C.B., February 25, 1907.

To the Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith my report of the fisheries of the Island of Cape Breton for 1906, being my twenty-second annual report.

Accompanying this report are the fishery statistics, which give in detail the full operations of the industry for the year, including quantities and kinds of fish taken, values of the products and materials engaged therein, also the number of people employed.

I regret to have to report a decrease in total value, compared with the year 1905, of \$67,380. In the six leading commercial branches, namely, cod, lobsters, mackerel, salmon, herring and haddock. Cod and mackerel alone give an increase in value for the year. In each of the other four branches there were decreases. The following tabulated statement will give at a glance the extent of the increases and decreases.

	1905.	1906.	Increase.	Decrease.
	\$	\$	\$	\$
Mackerel.....	318,174	341,393	23,219	
Cod.....	266,126	287,172	21,046	
Lobsters.....	369,101	294,336		74,765
Herring.....	122,849	98,800		24,048
Haddock.....	97,929	90,736		7,193
Salmon.....	28,840	27,092		1,748

In order to give at a glance the counties which have contributed to the increases and decreases I give the following tabulated statement. It will be observed that the greatest decrease \$54,271, has taken place in the mining and manufacturing county of Cape Breton, caused by the drain on the fishing districts of men to work in the coal mines and the two large iron and steel industries within the county. The fact that at

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the time this report is being written the Dominion Coal Co., alone, is in need of at least 500 more men shows why there is such a drain for labour on the other districts :—

County.	Value.		Increase.	Decrease.
	1905.	1906.		
	\$	\$	\$	\$
Cape Breton	341,314	287,043		54,271
Inverness	313,557	312,983		574
Richmond	526,196	531,305	5,109	
Victoria	157,811	140,167		17,644

LOBSTERS.

The greatest decrease has taken place in lobsters. In my preliminary report I predicted that the year's statistics would show a marked decrease in lobsters. While lobsters were found plentiful at the beginning of the fishing season, they soon became scarce, to such an extent that before the middle of the fishing season had arrived, fishermen began to abandon this branch and engage in other fishing. The increased price paid for lobsters by packers, who had contracted at an advanced price for the disposal of their pack to wholesale dealers, could not induce the fishermen to continue to the end of the season, so scarce and small the lobsters became. On my visits to canneries, I asked packers and fishermen if they could assign reasons for the scarcity of lobsters, and the answers to my questions were so conflicting that it left the impression on my mind that neither packers nor fishermen could assign any plausible reason. Few of them, however, would acknowledge that overfishing was the cause of the scarcity of lobsters, as in the previous season they were as plentiful as usual up to the close. Climatic conditions were not favourable for this particular branch of the industry. The early part of the Cape Breton fishing season was characterized by prevailing easterly winds, frequently heavy gales, which apparently caused those shell-fish to seek the protection afforded by deep water. A significant feature, however, of this particular fishery was the abundance in which lobsters were found in the Western Coast of Nova Scotia and in the lobster bearing districts of New Brunswick and Prince Edward Island at the time they were so scarce on the Cape Breton coast. This would indicate that lobsters were more of a migratory fish than they are generally credited with being. Many are of the opinion that this country should have a larger number of hatcheries, and that the lobster bearing grounds should be stocked yearly by fry from those hatcheries. I favour restriction of the fishery in preference to stocking of ocean waters by artificial means. Each lobster lays thousands of eggs, most of which hatch, but a small percentage live to grow up. This is not the fault of the mother, for she carries them about with her for nearly a year, and with admirable instinct guards them till the young are set free. Her duty is done for they must then shift for themselves. Though hardly larger than mosquitoes, being about one-third of an inch long, the little ones leave their parents on the bottom and swim toward the light, to the surface, where from one to two months, if fortune favours them, they lead a precarious roving life. The open sea is a poor nursery for such weaklings, which become exposed to every storm and the prey of numberless hungry sea scavengers. Out of a brood of, say, 10,000, possibly not more than one and a half per cent reach maturity, or live to end their career in boiler or on red hot coal. The same elements of the sea, the same scavengers, would be as fatal to the artificial, as to natural brood. It is for this reason I favour restrictive regulations, vigorously enforced.

COD.

The increase in the value of the cod catch of \$21,046, over the previous year is not large, yet it is a pleasing feature of the year's operations. This fish being the leading commercial fish, is more generally prosecuted than any other branch, has a longer season, and so far as maritime waters are concerned never fail, the supply keeping up. I do not think that even with improved methods in the capture of this fish, the supply will diminish. Of course, scarcity of bait, and the dog-fish pest are obstacles cod fishermen have to contend with, but still this fishery is the most profitable to the average fisherman. The fish-traps are becoming numerous in certain districts. The reason of this change from hand line and baited trawl is the scarcity of bait in mid-summer. While in some districts fishermen have taken advantage of the government's generous assistance for the establishment of bait freezers, in other districts fishermen have not done so. Indifference and jealousy among fishermen in certain localities are the reasons there are not more freezers, and established freezers in a few cases are not properly utilized. A freezer with a capacity of 100 tons has just been completed at North Sydney, and good results may be expected from it. Abundance of herring in the spring is available, and at certain seasons squid. North Sydney is becoming year by year a fishing centre. United States and French schooners call at this port for bait and ice. Last year two steam-beam-trawlers came to this port from France, and engaged in beam-trawl fishing on the outside banks. The sending out of those two trawlers from France to this port was an experiment, and an agent has lately arrived and reports that there are fifteen of those trawlers coming out in May. I have made inquiries and find that one of the trawlers last year paid \$1,600 and \$3,500 respectively at this port for supplies and coal. I understand that the agent is now corresponding with the Customs Dept. to have supplies come in bond. With the bounty of \$2, per quintal paid by the French government, and the facilities for prosecuting the industry in our ports, and their proximity to productive cod banks would give French fishermen an advantage over our Canadian fishermen. It seems therefore that the privilege of allowing those foreigners to take aboard dutiable goods from bonded warehouses might be withheld, if legal to do so. Nevertheless a large proportion of supplies would require to be purchased by them at this port.

MACKEREL.

This important commercial fish gives a total increased value for the year over 1905 of \$23,219. This increase is made up in the counties of Victoria, \$13,095; Richmond, \$18,222; and Cape Breton, \$4,600, a decrease of \$12,699, occurring in the county of Inverness. In the autumn of 1905, mackerel schools on their way south from the Magdalene Islands and North Bay, instead of following as usual the southern coast of the island, took the north western coast of Inverness County, passing through the Strait of Canso. The fishermen on the coast of Inverness were not prepared for the appearance of those large schools. Many schools had thus passed before they became aware of the presence of large fat mackerel in abundance. However, the fact became known, and with baited hook and a few gill-nets large numbers of large fat mackerel were captured. Last season, however, found the fishermen better prepared, but mackerel took their accustomed course, passing as in former years on the south eastern coast of Cape Breton, hence the increased catch of this valuable fish would be greater each season if our fishermen would equip themselves with better gear and pursue this fishery with more industry. The natural northern home of those fish, and where they spawn, are the waters of the North Bay and Magdalene Islands. Beginning with August, they begin to move south, but the large schools do not leave for the south before the end of September and first of October. When on the move, if the weather is fine they keep well inshore, but in stormy weather, particularly during easterly and northerly gales, they keep out into deep water, and are thus lost to shore fishermen. The destructive agency is the American purse-seine in the spring season when mackerel are on their way to the spawning grounds north from the south. Our Canadian fisher-

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men have practically abandoned the purse-seine since their exclusion from fishing inside the three mile limit. I beg to recommend that Canadian fishermen be allowed to use the purse-seine inside the three mile limit after August 1st. To exclude our fishermen from the use of the purse-seine in their own waters after the spawning season is over, when American fishermen are enabled to follow mackerel schools with their destructive methods from Cape Hatteras to the North bay and Magdalene islands, (outside of Canadian waters of course), spawning grounds and in the spawning season, seems to me to be unfair to our Canadian fishermen. I beg here to recommend the amending of this particular Order in Council so as to allow the use of the purse-seine by Canada's fishermen inside the three mile limit after August 1st of each year.

SALMON.

This branch shows a decrease in value of \$1,748, compared with that of the previous year. Weather conditions affect this fish probably more than any other. Seldom do gill-nets do well in stormy weather. Those nets are connected to the shore by a leader, and if the weather is blustery, salmon remain in deep water and do not follow the shore line as they do in calm weather. For instance, on the Margaree shore of Inverness, the gill-nets did poorly during stormy weather, while those fish kept the channel from the sea and entered Margaree river in greater numbers than for the past twenty-five years. Thus while gill-net fishermen on the coast did not do well, the gill-nets inside in the estuaries, or tidal waters and anglers up the rivers did exceptionally well. The habits of those fish are not very well understood even by those who have been engaged in salmon fishing all their lives. Salmon live alternately in the sea and in the river where they were produced. But at sea their wanderings are very restricted. Salmon does not travel far from the mouth of the river in which he was born. This is the rule. But there are exceptions. Here is a specified case. Two salmon, marked, were set at liberty in the same river and were recaptured in the sea three and two years later, but 372 miles and 186 miles further north. Doubtless these two would never have regained their natal stream. Nevertheless the rule exists that the salmon born in a given river returns thither, and when at sea remain near the shore, and not far from the river's mouth. Salmon rivers should be vigorously protected, particularly in the spawning season. I believe expenditure in protecting rivers bring forth greater fruit than expenditure in artificial breeding, particularly where hatchery breeding and stocking of rivers with delicate salmon fry is not properly attended to, as is too often the case.

HERRING.

The total value of the herring yield for the year 1906 was \$98,880, (fresh and salted), a decrease over the previous year of \$24,048. The year 1905 was an exceptionally good one for this branch of the fishery, as in 1904 the value of the total catch in Cape Breton was \$86,745, against \$122,849 in 1905. The county of Cape Breton made up the increase in 1905, and of course the decrease in 1906. Those fish enter our bays and harbours in large schools in the month of May and the first days in June, or as soon as the ice disappears. They come from the sea to our bays and harbours to spawn. Dogfish appear to be a greater enemy of herring than any other fish, as those fish disappear from inshore as soon as dogfish make their appearance. There is no doubt dogfish is the cause of the disappearance, during the past dozen or more years, from our inshore of the mid-summer herring schools which were of such value to our people. In former reports I have pointed this out. That some of those large fat fish are still in haunts in Cape Breton waters is evident. For instance, some of the fishermen of Grand Narrows last autumn came into possession of one or two nets of large sized mesh, used formerly in Sydney Harbour for mid-summer herring. They set these nets in the month of December in the upper part of Bras d'Or lakes, with the result that large fat herring were caught, apparently the same class of herring as were taken formerly in mid-summer, or before dogfish became so numerous on our coast. It may

be that those excellent food fish are in sufficient numbers in the Bras d'Or lake waters to warrant a greater effort for their capture. No doubt nets of a larger mesh than those used to catch small sized herring will be purchased by some local fishermen in the Grand Narrows district for the purpose of catching those fish if they are there in paying numbers. For bait purposes the spring herring fishery is invaluable. They are sought after not only by local people but by foreign fishing vessels for bait purposes. I have endeavoured to protect the immediate spawning grounds in this harbour from gill-nets and seines.

HADDOCK.

There is a small decrease in the total value of haddock of \$7,193. The value of the total catch for the year, dried, fresh, and cured (finnan haddies), amounted to \$90,736. It is difficult to get at the exact figures, no fishermen, in many cases, in giving returns include them with the cod catch. The salting and drying process is the same as in the case of cod, and nearly every quintal have a few haddock in them. Trap-nets pick up more haddock and pollock than any other kind of fish. Those fish move about in the early part of the season in schools and as they follow the shore lines enter the traps. It seems to me that factories for the conversion of haddock into finnan haddies should bring good returns in Cape Breton to investors. The only district in Cape Breton where those fish are now converted into finnan haddies is that of Isle Madame. It seems to me that a factory could be operated with great profit at Ingonish. The market for finnan haddies is unlimited, particularly in western Canada.

OTHER BRANCHES.

The total value of all other kinds of fish, (of the fin and shell species) taken in the Cape Breton district during the year was \$131,963. The total value of these fish in 1905 was \$135,859, a decrease of \$3,890. It is difficult to get accurate statistics of those minor kinds of fish, as a proper record of the respective catches are not kept, as is the case in the leading commercial branches.

The oyster statistics gives an increase over the previous year. The total value of oysters for 1906 was \$6,222, against \$2,650 in 1905, an increase in value of \$3,572. The increased price in 1906 per barrel, I must add, contributed to the total value of the increase over the year of 1905. Cape Breton estuary waters are specially adapted for the propagation of this valuable shell fish, and I think conditions, as they exist to-day, call for some special attention from the department. Certain oyster bearing waters should be cleaned and the grounds re-stocked by young healthy oyster, or 'spat.' At present some of the best oyster bearing grounds are covered by sea weed and the wash from adjacent fields. The result is the beds become 'smothered' by this accumulation of substance with the result that they become, in time, extinct. While oyster bearing districts in other sections of the maritime provinces have received special attention, nothing has yet been done to either assist or preserve the oyster in Cape Breton.

In the fisheries as in every kind of industry improved methods are being employed from year to year. Methods that will enable toilers to prosecute their calling with more profit and less labour should be encouraged by the department. The day is not far distant when the motor-boat will take the place of the ordinary row or sail boat in fishing. For this reason I think the department should amend the Fishing Bounty Regulations so as to permit motor, or gasoline boats, to participate in the Fishing Bounty. For instance a 23 ft. keel boat of 7½ H. P. consumes one gallon of gasoline per hour and a quarter. The gasoline costs about 31c. per gallon. Six men can comfortably fish in a boat of this size. Such a sized motor-boat and of same horse power would cost, fitted for fishing, about \$300. It seems to me that fishermen who encounter such difficulties in reaching the fishing banks in the old fashioned row or sail boat would not hesitate to replace it by the motor-boat. Half the time is lost in an ordinary fishing season in consequence of adverse winds. This drawback could be overcome by the employment of the motor-boat. To encourage fishermen in this improved boat for

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fishing, the bounty should be extended to owners of such, as well as fishermen who use them.

During the year the conditions of water courses for fish have been improved by the opening of sand beaches and the clearing out of debris from certain rivers. In most cases the upper waters are now more easily reached by the different kinds of fish which seek them to spawn.

I have held a number of fishery courts to hear complaints against alleged offenders. In the majority of cases convictions have been entered, and in three cases only were fines paid. Against four others I have issued warrants of convictions, and in only one case was the convicted jailed. The warrants in the other cases are still in the hands of the constable. I find it most difficult to get local officers to execute warrants. I have asked the provincial authorities to appoint a constable who can be sent into any county of the province to execute papers, and hope by this means to punish offenders of the fishery laws. In the Margaree district is the inclination most in evidence to violate the regulations. To stop the nefarious practice the assistance of outside patrol officers are needed; the local officers are useless, and their employment a waste of the country's resources. In other districts the regulations were well observed.

I have the honour to be, sir,

Your obedient servant,

A. C. BERTRAM,

Inspector of Fisheries.

SYNOPSIS OF FISHERY OVERSEERS' REPORTS FOR THE ISLAND
OF CAPE BRETON.

INVERNESS COUNTY.

Overseer D. F. McLean, of Port Hood, reported an increase of catch during the year in the following branches:—salmon, herring, haddock, halibut, trout, smelts, and squid, and a decrease in lobsters, cod, hake and eels. Dogfish continue to be troublesome to fishermen. About one-fourth of the year's catch was used for home consumption, the remainder exported.

Overseer Wm. AuCoin, of Cheticamp, reports gulf free of ice 20th April, and beginning of fishery operations at that date. The first fish taken were herring in gill-nets. Those fish were found unusually abundant and of good quality. Herring entered largely into home consumption and for lobster bait. The refrigerator at Eastern Harbour was utilized with much benefit to fishermen. The lobster fishery was poor in quality and in quantity. The lobster season's operations resulted in a loss to packers. 'Cod, hake, and haddock fishing resulted in an average catch. 'Launce' or sand eel caused the cod family to keep well in shore. The small fishing craft, as a result, did well. Dogfish were less troublesome than during the past few years. Many are being captured by local fishermen. Salmon were abundant. Not for many years were so many taken in gill-nets on the Cheticamp coast. About ninety per cent of the season's catch was exported, the ten per cent used for home consumption. The regulations were splendidly observed during the season, the camps in Little River now add to efficient protection of that river.

Overseer A. A. Chisholm, of Margaree Forks, reports a decreased catch as a result of the season's operations, although the fishery was vigorously operated and the number of persons engaged larger than the previous year. Blustery weather, scarcity of bait and presence of dogfish were the chief causes of decrease in catch. Cod was about an average, while mackerel was thirty per cent below 1905. Herring, halibut, hake and haddock were an average catch. The lobster fishery was below the previous year. The salmon fishery on the coast was barely an average catch, but in the tidal waters of the Margaree, gill-net fishermen did well, and for surface fly fishing, sportsmen have not done so well for thirty years.

Overseer Peter Gillies, of South West Port Hood, reports a short pack of lobsters. They were fairly plentiful at the beginning of the season, but became scarce towards end of May. The cause he attributes to unfavourable weather conditions. Cod were plentiful, but fishermen do not fish now as vigorously as formerly; prefer engaging in mining. Salmon were more plentiful than for thirty years. Regulations were well observed.

Overseer Albert J. Hart, of North East Margaree, reports that salmon were very plentiful in the Margaree during the season and more of those fish were captured by surface fly fishermen than for the past number of years. He estimates that about 4,000 pounds were taken by fly in his section of the river, and about 2,000 pounds of trout. A number of boats used in illegal fishing were confiscated. The offenders could not be recognized as they were always in gangs and masked. He considers the guardians were as vigilant as they could be expected to be, considering the remuneration they receive.

Overseer Geo. P. McIntosh, of Pleasant Bay, (an officer of a few months) reports a decrease in pack of lobsters in the Pleasant Bay district. Herring were plentiful, but mackerel were scarce, with the result of a decrease in catch. Dogfish were very troublesome during the fishing season.

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VICTORIA COUNTY.

Overseer W. R. Moffatt, of Dingwall, reports a decrease in salmon, cod, and haddock fishery for the past season. He attributes scarcity of bait and stormy weather as the cause of the shortage. The mackerel fishery was much better than in the previous year. There was an increase in catch of herring. Dogfish continues to be a menace, and he recommends some means for their depletion.

Overseer D. P. Montgomery, of Neil's Harbour, reports a poor catch of commercial fish in early part of the season, but in autumn months those fish struck inshore in large numbers and resulted in an average season's catch. The trap was successful in making a few good hauls of mackerel, haddock, and pollock. Herring appeared plentiful, but fishermen are discouraged in setting gill-nets in consequence of injury to nets and fish which get into them by dogfish. The lobster canning industry was a third below that of the previous year.

Overseer, Alex. Morrison, of Wreck Cove, reports a decrease in lobster pack and herring fishery, an average catch of cod, and an increase in haddock, pollock and mackerel. The trap-nets he credits to the increased catch. In salmon, the increase is fifty per cent over the previous year. Excepting that used for home consumption, commercial fish were exported to Canadian markets.

Overseer Duncan Gillis, of Baddeck, reports a decrease in herring, cod, haddock, and gaspereaux, and an increase in salmon, trout and lobsters. Cause of decrease he attributes to their scarcity in the Bras d'Or waters. The Sydneys are the principal markets for fish caught in the Bras d'Or waters.

CAPE BRETON COUNTY.

Overseer A. R. Forbes, of North Sydney, reports a marked decrease for the season in the catch of cod, haddock and lobsters, and an increase in herring. The season was generally stormy which interfered considerably with fishing operations, particularly the lobster fishery. This shell fish did not appear as plentiful as in the previous season. Unfavourable weather, scarcity of bait, and dogfish were the main causes for decrease.

Overseer H. C. LeVatte, of Louisburg, reports a decrease in the lobster pack as well as in the export of live lobsters. Unfavourable weather and scarcity of lobsters were the causes for those decreases. While scarcity of bait, frequent gales, and dogfish interfered considerably with the operation of the industry, still the fishermen had a fair season in consequence of the improved prices ruling. One marked feature in his district was the decreased catch in mackerel, which apparently kept off shore on their return to their southern haunts.

Overseer Angus McLeod, of Port Morien, (a new officer) reports a decrease in the lobster packing industry. Those shell fish were scarce and storms in the early part of the season prevented fishermen from visiting their traps frequently during the season. Dogfish were very troublesome in midsummer and also contributed to the decrease in catch of commercial fish. The prices of all kinds were in advance of previous years.

Overseer John McLean, of Gabarus, reports an increase in the catch of herring in his district, also slight increase in mackerel, and cod, but a decrease in the lobster pack and in live lobster export. In the first part of the season lobsters appeared plentiful, but during prevailing high winds lobsters became scarce until towards end of the season. It did not pay either packer or fishermen to continue to the end, and the canneries were closed down.

Overseer M. R. McInnes, of Amaguadee Pond, (Grand Narrows and East Bay districts) reports a decrease in cod and herring, the only two branches of commercial fish caught in his district. The early formation of ice on the Bras d'Or lakes was the

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cause of the decrease in the two branches. The ice in the spring broke up and kept drifting, which precluded fishermen from setting gill-nets and engaging in hand-line cod fishing. Some live lobster were taken in the Big lake and exported. Local markets were supplied with eighty per cent of the cod and herring.

Overseer Murdock McLean, of Leitches Creek, reports an increase in the spring herring catch, which was largely purchased by St. Pierre, United States, and western Nova Scotia vessels. Those fish strike into the Western Arm of Sydney harbour and are used largely for bait by the foreign and local fishermen. Ten per cent are used for local consumption. There are very few of other kinds of fish caught in his particular district.

Overseer Timothy Sullivan, of Little Bras d'Or, reports nearly an average catch of lobsters in the three factories in his district and a decreased catch in cod. Other branches were about an average catch. The coal mines now employing all available labour at good wages draw people from the fishing industry.

RICHMOND COUNTY.

Overseer D. R. Boyle, of West Arichat, reports a fair average in the total value of the industry in his district. While some branches show a decrease others show an increase, and with the advance in prices give the fishermen a fairly prosperous season. In the number of fishing vessels employed there was an increase of four, and an increase of fourteen fishermen. In boats, there was a decrease of forty-two, and in fishermen of sixty-one. There has been an increase in the value of fishermen's gear of about \$1,000. In herring the statistics show an increase of 393 barrels of salt herring, and in mackerel of 1,200 barrels. A decrease of 1,296 cwt. in dry cod and an increase of 753 cwt. in dry haddock and 62,000 lb. increase in finnan haddies. A decrease of 233,000 lb. in fresh haddock, and a decrease of 454 cwt. in dry pollock. The statistics of the lobster industry show a decrease of 21,000 lb. in the preserved article, and an increase of 501 cwt. in fresh or live lobsters for export. Of the above fish there was shipped to Canso, Mulgrave, and elsewhere, 255,000 lb. cod, 23,500 lb. pollock, and 6,000 hake, aggregating in value \$194,499. Canned and fresh lobsters were shipped to the United States; dry cod and haddock to Halifax, and herring and mackerel to P. E. Island. Fresh mackerel, eels, smelts, to Boston and New York; finnan and smoked haddock to Montreal and North Western Canada. The decrease of lobsters is becoming more evident year after year in his district and something should be done in re-stocking the grounds from hatcheries, otherwise the industry will not be worth prosecuting.

Overseer Arthur Brymer, of Lower L'Ardoise, reports a fairly prosperous season. An increase in total value of \$20,000 over the previous year. A notable increase of mackerel occurred in St Peter's bay. There were also increases in catch of herring, cod, and haddock, in his district over the previous year. All other branches of the fisheries were an average catch. Herring were plentiful, but owing to the enormous number of dogfish, fishermen were discouraged from setting gill-nets for those fish. There was a decrease in the catch of lobsters.

Overseer Archibald Morrison, of River Bourgeois, reports a decrease in lobsters, cod and mackerel, the three leading commercial branches of the industry. The value of appliances engaged in the fishery also decreased during the season in his district. Owing to the demand for labour, fishing vessel owners now find it difficult to obtain services of crews for their vessels. The result is that the vessels are engaged at other employments. The decrease in number of vessels he accounts for the decrease in catch of cod and mackerel. Cod and mackerel were marketed in Halifax. Lobsters were exported.

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DISTRICT No. 2.

ANNUAL REPORT OF THE FISHERIES OF DISTRICT No. 2, NOVA SCOTIA,
COMPRISING THE COUNTIES OF ANTIGONISH, COLCHESTER, CUM-
BERLAND, GUYSBOROUGH, HALIFAX, HANTS AND PICTOU.

To the Dominion Commission of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the fisheries of District No. 2, Nova Scotia, together with tabulated returns of statistics, also schedules showing the increase or decrease of the catch of each kind of fish.

The estimated value of all the fish taken in the district during the present season is \$2,200,087, which is about ten per cent less than the estimated value of the catch of the year 1905.

Of the deep sea-fishes there is a decrease with catch of codfish of about 5 per cent, an increase of 5 per cent in the catch of haddock, a decrease of 33 per cent in the catch of hake, an increase of 14 per cent in the catch of pollock, and a very large decrease of 75 per cent in catch of halibut.

Of the anadromous fishes there is a satisfactory increase in the catch of salmon of about 32 per cent in the whole district.

In the counties bordering on the Straits of Northumberland the increase was 27 per cent. In the counties of Halifax and Guysborough on the Atlantic coast the increase was 46 per cent, and in the counties bordering on the Bay of Fundy there was an increase of 17 per cent.

During the autumn months the condition of the rivers was on the whole favourable to the salmon fishery during September and October, the rivers were so low that the fish could not ascend for spawning purposes. While early in November copious rains filled the rivers and they remained full during the period when the fish deposit their eggs, so that poachers could not spear them when they did ascend.

SHAD.

This fishery is in the same unsatisfactory condition reported last year, a very few more barrels were taken, but compared with the catch in former years that of this year is insignificant.

The present close season is from Friday evening at sunset to Monday morning at sunrise, and is altogether inadequate for the preservation of the fishery. There should be a close season restricted to the time when the fish are in the rivers for spawning purposes and to cover all that period, viz., May and June in each year.

The following is a statement of the annual catch in this district since 1889, and it may be said that 95 per cent of all the shad taken in the district are caught in the counties of Cumberland, Colchester and Hants.

	Barrels of shad taken.
1890.....	756
1891.....	1,178
1892.....	1,811
1893.....	1,346
1894.....	981
1895.....	1,208
1896.....	1,090

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1897.....	1,382
1898.....	2,777
1899.....	3,208
1900.....	1,375
1901.....	749
1902.....	948
1903.....	2,115
1904.....	644
1905.....	333
1906.....	374

It may be well to repeat here that Overseer J. W. Davison reports that twenty five years ago as many as 5,000 barrels were taken in his division of the county of Colchester alone.

GASPEREAU OR ALEWIVES.

The catch reported last year was the smallest for seventeen years. That of this year is 21 per cent less than last.

The following statement of the annual catch reported since 1889 will show the present state of this fishery.

	Barrels of Alewives taken.
1889.....	7,320
1890.....	5,146
1891.....	4,663
1892.....	3,567
1893.....	4,121
1894.....	5,230
1895.....	4,450
1896.....	4,799
1897.....	2,783
1898.....	3,215
1899.....	2,682
1900.....	3,312
1901.....	2,840
1902.....	3,542
1903.....	3,317
1904.....	2,544
1905.....	2,322
1906.....	1,832

The close season for these fish is the same as for shad—from Friday evening sunset to sunrise Monday morning.

The fish are mostly taken at night and there would be no injury to the fishermen to make the close season from 6 o'clock in the afternoon instead of from sunset—then the guardians could ascertain whether or not the law was obeyed.

Considering the decline of the fishery I think the time has arrived when the close season should be extended from Thursday at six o'clock in the afternoon until 6 o'clock of the following Monday.

HERRING.

The catch is about 40 per cent greater than last year and is the largest reported since 1895.

MACKEREL.

The catch was 20 per cent over that of last year and about 30 per cent over the average catch of the past 18 years.

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HALIBUT.

The quantity of these fish caught varies greatly from year to year. The reported catch of last year was 847,590 lb., that of this year only 176,595 lb., the average annual catch of the past 18 years being about 300,000 lb.

LOBSTERS.

The quantity packed during the season was six per cent less than last year while the quantity sold fresh in shell is about 70 per cent less, the shortage being chiefly from that part of the district west of Halifax.

On the Atlantic coast the shortage in canned lobsters is, I believe, attributable to the boisterous weather which prevailed during the fishing season.

On the Straits of Northumberland there was a slight increase in the quantity packed over that of last year.

EELS

For a number of years more of these fish have been taken than formerly because of improved conditions in transhipments.

FISHWAYS.

A number of fishways are very necessary in this district to enable salmon to overcome obstacles (such as dams built across the river for industrial purposes) and reach their spawning resorts.

One of these is required on a dam on the Lawrencetown river in the county of Halifax, one on the Antigonish branch of the St. Mary's river in the county of Guysborough, one on South river in the county of Antigonish, one on Salmon river in the county of Colchester, one on River John in the county of Pictou, one on the Meander river in the county of Hants.

Such fishways should be built under official inspection and the builders required to have the structure conform to the plans and specifications furnished, otherwise change will be made in the grades which destroys the effectiveness of the fishway, or the extra trouble necessary to have the lower end well under water will not be taken, and then fish cannot enter the pass. While if the owners have not been duly notified that the hon. the Minister of Marine and Fisheries determines to be necessary for the public interest that a fish pass should exist in the dam, the fishery officers are powerless to require the structure to be built in conformity with the plans and specifications or to require the owner to maintain them in effective condition.

GUARDIANS

During the season seventy guardians have been employed upon the most important rivers in the district whose duty it is to patrol the river a certain number of hours for every dollar they are paid, mostly between sunset and sunrise. They submit reports every week they are on duty of the time they have spent on the river and the place, together with the hours of the day between which the service was performed, and for the service upon the certificate of the local overseer that after inquiry he believes the report to be correct, they are paid.

As one result of this patrol service, quite a number of nets are confiscated for being illegally set, poachers are pursued and arrested.

During the past season 48 persons were summoned for violation of the Fisheries Act, four were convicted by the local overseers on view tried of the offence, three were

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tried and convicted by local justices on complaint of fishery officers and forty-one were tried by the inspector acting in his capacity of justice of the peace ex officio for the purposes of the Fisheries Act, and of these, four cases were dismissed and the remainder convicted and various penalties from five to twenty dollars inflicted.

I have the honour to be, sir,

Your obedient servant,

ROBERT HOCKIN,
Inspector of Fisheries.

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DISTRICT No. 3.

ANNUAL REPORT ON THE FISHERIES OF DISTRICT No. 3, COMPRISING THE COUNTIES OF LUNENBURG, QUEEN'S, SHELBURNE, YARMOUTH, DIGBY, ANNAPOLIS AND KING'S.

BARRINGTON PASSAGE, N.S., May 2, 1907.

To the Dominion Commission of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report for the District No. 3, of Nova Scotia, together with the tabulated statements of the yield and value of the different fisheries for the season of 1906.

The total yield of all the fisheries, production compiled from the returns of the different officers is valued at four million and a quarter dollars. Although this quantity is somewhat less than that of the previous catch, yet the result is satisfactory, as prices ruled higher than ever.

The following statement gives the relative importance of the different counties of my division showing the fluctuation from last season :

Counties.	1906.	Increase.	Decrease.
	\$	\$	\$
Digby.....	1,155,458	.....	158,600
Shelburne.....	1,118,484	.....	55,017
Lunenburg.....	907,570	37,737	.....
Yarmouth.....	672,601	.....	40,000
Queen's.....	200,169	77,345	.....
King's.....	157,114	33,713	.....
Annapolis.....	116,778	.....	66,032

The increase noted in Lunenburg county is not due to line fish, as might be expected from its large fleet of schooners seeking the grand banks, but to improvement in the captures of mackerel, herring and lobsters.

The increase noted in the county of Queen's is ascribed chiefly to the large capture of mackerel off the Liverpool harbour, which was the best for the past twenty years—120,000 mackerel were stopped in one haul by a single trap, while other traps were not far behind. The local fishery overseer states that the catch, as returned by him, is more likely under the mark than overdone.

This improvement must have been general to that whole district. While the mackerel catch for that year is valued at nearly one quarter of a million dollars, the previous one only reached \$36,000.

Notwithstanding the increased prices of dried prepared fish, there seems a falling off in the production of these line fish, in nearly every county of this district, especially Shelburne, Digby and Yarmouth.

The larger number of fishing vessels mentioned in some of the above counties were large boats over ten tons which have been registered in order to secure more bounty. A great many gasoline boats are now used, enabling their owners to return home in better time, and many other facilities which develop with progress.

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Fishermen in large fishing centres have a number of different kinds of boats and only use them as needed, perhaps not once in two weeks. They have a seine boat ready to use a seine when a school of fish is noticed. They have also a watch boat which is fastened to the seine on trap to be used when required. As a rule, eight or ten fishermen use in company all the boats on shore near the trap or seine. Sometimes one man may use five or six different boats during the one day. In cases when fishermen go out to sea a number of miles in their boats, there would be two men in a boat. This explains why in some localities there are more boats than men, which would be hard to be understood by the uninitiated.

Although Digby county shows a large falling in the total value of its fisheries, it would be larger still were it not for the good catches of mackerel and herring effected this season, which was the best for years. The bays of Fundy and St. Mary's give Digby county an extensive sea coast and are very valuable fishing grounds.

There are villages in Digby Neck where nearly everybody is engaged in the various fishing industries. At one of these small places, the local officer states that in five weeks, nine trawl boats and six-hand line boats caught over 600,000 lbs. of line fish of cod family. Upon one occasion a man and his young son captured nearly 1,000 lbs. of the cod in a few hours. There are also several weirs effecting large captures of fish. One of them at the head of St. Mary's bay secured 35,000 lbs. of cod besides other fish in three weeks' fishing. These weirs receive no bounty. This fact might partly explain why some counties with larger fleet, perhaps partly idle for want of crews, &c., secure more bounty than Digby with less fish.

The Digby fish are shipped to St. John, Boston, New York, Cuba, &c. A single firm at Centreville does a fish business of about \$100,000 worth per annum, preparing and shipping fish to all parts of the world.

CAPITAL INVESTED IN THE INDUSTRY.

The amount invested in fishing gear and implements does not vary much from year to year, and their total number is about the same. But a better class of crafts are now superceding the old ones. Gasoline power is getting quite common in those fishing crafts, enabling the fishermen to visit certain grounds at great distances and return home the same day. It is an innovation which merits encouragement; not only for saving time but for securing better facilities for the curing of their catches and bringing them to markets.

For the season 1906 no less \$2,277,400 were invested in fishing implements, &c., in this district alone, comprising crafts and gear of all kinds.

The number of persons engaged in the different branches of this industry aggregated 13,542, including persons employed in the sixty lobster canneries of my district.

I have the honour to be, sir,

Your obedient servant,

A. C. ROBERTSON,

Inspector of Fisheries.

APPENDIX No. 2—*Continued.*

FISHERY STATISTICS

NOVA SCOTIA

District No. 1

“ No. 2

“ No. 3

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Richmond, Province of Nova Scotia, for the Year 1906.

Name.		KINDS OF FISH.																				TOTAL VALUE OF ALL FISH.	Number.		
Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lb.	Hake, dried, cwt.	Hake, sounds, lb.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Smelts, lb.	Alwives or Gaspereau, brls.	Eels, brls.	Clams, brls.	Flounders, lb.	Tom-cod or Frost fish, lb.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	\$ cts.	Number.		
Richmond County.																									
.....	200	10	31000	155	80	100	18,086 50	1	
.....	.....	370	.....	.....	60	.....	40	.....	20	.....	.....	8000	12	.....	.....	.....	6000	.....	.....	120	90	16,784 00	2
10656	3250	90	55	5000	400	15000	30	1300	165	23,641 50	3	
24720	630	2055	16	350000	1096	228000	460	195	470	3800	600	2	20	30	22750	360	752	675	190	84,355 75	4	
22704	830	1497	23	196000	1560	160	160	310	750	4500	22	60	70	53500	200	750	405	160	60,525 50	5	
6084	142	765	12	2600	442	43	1500	600	4	20	25	55800	55	180	255	166	28,035 50	6	
.....	13	1184	5	700	385	10	16	2000	4300	4	145	35	7300	28	125	390	190	13,676 00	7	
7104	21	175	.....	5200	67	.....	16	6	110	700	750	2400	40	45	7	8500	3300	35	55	170	55	9,433 50	8
17616	.....	800	4	19000	1000	.....	14	8	500	1000	140	300	100	20	7	7000	6000	50	90	500	100	36,840 30	9
1040	L'Ardoise, Lower and West.	6500	23	27000	3700	.....	20	10	1200	2400	450	.....	375	14	9	5900	8500	100	360	6400	180	176,618 00	10
16560	Grand River and Pt. Michaud	220	400	5	500	150	30	12	160	2200	690	50	35	24	5000	5000	37	56	410	45	15,895 50	11			
17316	L'Archevéque and St. Esprit	170	350	4	4000	220	17	8	80	1600	500	.....	47	27	20	6200	7000	57	70	255	55	12,520 50	12	
.....	Framboise and vicinity.	275	5	2100	110	.....	15	8	75	2000	500	.....	20	22	17	6200	5000	25	37	200	65	5,356 00	13
28896	Fouchu.	150	750	3	700	29	5	3	175	3000	200	.....	20	10	10	8000	6000	50	100	600	100	14,999 75	14	
.....	Irish Cove to Lynch River, including Bar Head and Red Islands.	610	8	20	7	105	1850	3630	35	70	3750	6400	30	345	20	6,597 25	15
.....	Fresh fish as below	8,940 00	
151656	2176	19111	108	607800	8909	228000	857	417	3319	25950	5080	24700	731	491	247	242000	47200	1152	2635	12255	1681	532,305 25	Totals.	
37914	10880	95555	1080	18234	31181	13680	2142	104	9957	2595	508	1235	2924	4910	988	7290	1416	4608	5270	3676	2521	Values	

To the above add 255,000 lb. fresh codfish, \$7,650; also 8,500 lb. fresh pollock, \$170; also 6,000 lb. fresh hake, \$120.

Return showing the Number, Tonnage and Value of Vessels, and Boats, and the Quantity and Value of Fishing Materials in the County of Cape Breton, Province of Nova Scotia, for the Year 1906.

Number.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.						LOBSTER PLANT.				KINDS OF FISH.					Number.			
	Vessels.		Boats.		Gill-nets.		Trawls.		Hand lines, No.	Hand lines, Value.	Canneries, No.	Canneries, Value.	Traps, No.	Traps, Value.	Persons Employed in Canneries, No.	Salmon, fresh, lb.	Salmon, smoked, lb.	Herring, salted, lbs.	Herring, fresh, lb.		Mackerel, fresh, lb.		
	Number.	Value.	Men.	Number.	Value.	Men.	Number.	Value.															
Cape Breton Co.																							
1																						1	
2																						14000	
3																						30	
4																						30	
5																						200	
6																						100	
7																						1000	
8																						2500	
9																						890	
10																						1830	
11																						550	
																						1485	
																						28312	
																						35648	
																						283	
																						37179	
																						480	
																						2856	
																						4277	

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RETURN showing the kinds and quantities of Fish and Fish Products in the County of Cape Breton, Province of Nova Scotia for the year 1906.

Number.	DISTRICTS.	KINDS OF FISH.																	TOTAL VALUE OF ALL FISH.	Number.			
		Mackerel, salted, brls.	Lobsters, preserv- ed in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, dried, cwt.	Hake, dried, cwt.	Halibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.	Alewives or Gas- pereau, brls.	Eels, brls.	Oysters, brls.	Flounders, lb.	Tom-cod or frost fish, lb.			Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish, as bait, brls.
1	Cape Breton County.																						
1	Gabarus Bay and vicinity	450	50816	1321	2800	..	..	100	..	200	1500	200	30	6000	145	10	..	..	..	10	..	1200	15
2	Louisburg	150	24000	450	1200	..	5000	300	..	40	..	..	..	..	..	..	..	..	..	..	1000	300	
3	Big Lorraine and vicinity	120	10752	75	950	..	3000	220	..	32	..	..	..	..	..	..	..	..	..	..	900	200	
4	Little Lorraine to Mira River, including Main-a-Dieu	48	36096	165	2650	..	..	508	..	495	3530	280	3½	500	35	..	..	..	..	12	..	830	57
5	Scatarie Island	9	..	..	800	..	..	80	11	100	4000	..	3	..	16	..	..	..	..	..	365	25	
6	Port Morien . . . . .	..	17712	..	520	..	..	..	..	90	20500	..	½	..	..	7½	..	..	..	..	20	294	250
7	Glace Bay and Big Glace Bay	35	..	210	1265	8	..	130	15	90	8500	..	..	..	..	..	..	..	20	..	1100	110	
8	Lingan to Low Point and South Bar	26	35808	8000	1880	11	..	236	20	149	3000	..	..	..	..	..	..	..	22	..	1700	150	
9	The Sydneys and vicinity	16	..	..	3210	..	400	43	..	362	1000	600	..	..	..	22	..	..	..	..	620	110	
10	Little Bras d'Or and Little and Big Ponds	10	59424	..	460	..	300	50	..	20	1000	..	..	300	..	13	..	..	..	6	185	900	
11	Piper and Irish Coves, includ- ing East Bay and vicinity . . . . .	..	..	201	1359	..	..	..	..	56	..	5700	..	8200	70	195	68	8700	5500	..	96	200	195
	Totals	864	234608	10422	17994	19	8700	1667	46	1634	43030	6780	37	15000	266	247½	68	8700	5500	70	116	8394	2312
	Values	12960	58652	52110	89970	190	261	5834	115	4902	4303	678	370	750	1064	2475	408	261	165	280	232	2518	3468
																							287,043 33

Return showing the Number, Tonnage and Value of all Vessels, Boats, Nets, &c., in the County of Victoria, Province of Nova Scotia, for the Year 1906.

Number.	DISTRICTS.				FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						LOBSTER PLANT.				KINDS OF FISH.				Number.			
					Vessels.		Boats.		Gill-nets.		Trap-nets.		Trawls.		Hand Lines.		Canneries.		Traps.		Salmon, fresh, lb.	Herring, salted, brls.	Herring, fresh, lb.	Mackerel, fresh, lb.				
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.										
<i>Victoria County.</i>																												
1	Little Narrows (both sides),...				36	480	42	79	1753	380			17	40	48	25					6	5	1700	27	24900	550	1	
2	Baddeck District				37	915	30	81	2052	840			10	60	76	45					1077	500	15	180	32700	500	2	
3	Boularderie				45	420	50	84	1845	460			18	80	77	35					870	430	4500	200	10000	50	3	
4	Englishtown to Cape Dauphin,				50	450	60	120	3520	1060			30	150	59	30										4		
5	North, Little and French rivers and vicinity				62	1240	102	177	5500	1920			49	490	183	95					2	800	2900	700	145		5	
6	Wreck Cove to Smoky Head				30	580	48	76	2520	1000	1	600	18	160	62	30					2	750	1500	5030	62	10000	14000	6
7	South Bay to Ingomish				68	1360	111	178	3916	1245	2	1000	80	560	270	270					1	800	400	2400	20	6000	10000	7
8	Middle Head and North Bay				127	2125	244	335	7475	2310	3	1700	120	845	420	420					2	550	1300	600	75	63900	2700	8
9	Green Cove and New Haven				64	1880	100	90	1800	900	1	1000	27	525	222	235					3	700	2500	2500	900			9
10	Dingwall to White Point				35	575	70	90	3060	1420	2	2000	10	50	500	750					2	900	2100	1800	700	350		10
11	Sparling Brook to Money Point				19	200	38	20	600	200					76	115					1	400	1600	1300	30			11
12	Bay St. Lawrence and vicinity				27	200	54	60	2070	960	1	800	10	60	108	150					1	400	2300	1850	90			12
Totals		8	131	2525	28	600	10425	949	1390	36111	12695	13	8600	389	3020	2101	2200	14	5300	16553	33885	32045	1349	147500	27800			
Values \$																						4806	6070	1475	3336			

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Victoria, Province of Nova Scotia, for the Year 1906.

Number.	DISTRICTS.	KINDS OF FISH.																			TOTAL VALUE OF ALL FISH.	Number.			
		Macquerel, salted, brls.	Lobsters, pre- served in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Hallbut, lb.	Trout, lb.	Smelts, lb.	Alwives and Gaspareau, brls.	Eels, brls.	Oysters, brls.	Clams, brls.	Tom-cod or frost fish, lb.	Squid, brls.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.	
1	Victoria County.																							\$ cts.	
1	Little Narrows (both sides)...											2150	4300		50	197		2350			75	28		4,862 00	
2	Baddeck District											5	400	625	1450	2	12	22	1	100		30	26	1,523 50	
3	Boularderie											200					5				20	105	125	2,928 75	
4	Englishtown to Cape Dauphin, North, Little and French rivers and vicinity											40	1150	250	350		12				50	230	100	3,281 00	
5	North, Little and French rivers and vicinity												50	500		9									
6	Wreck Cove to Smoky Head ..	60	29280																		40	65	55	10,187 00	
7	South Bay to Ingonish	135	17184																		33	160	30	9,300 00	
8	Middle Head and North Bay ..	62	7200																		80		1500	29,830 00	
9	Green Cove and New Haven ..	150	12720																				1140	24,272 50	
10	Dingwall to White Point.....	130	31464																		40			1850	25,729 00
11	Snarling Brook to Money Point ..	100	10656																				200	1000	14,478 50
12	Bay St. Lawrence and vicinity ..	84	14400																			10		5,210 00	
		35	14304																		15			200	7,643 50
																						as bel ow....		*922 00	
	Totals	756	137208	10	8370	3 450	4720	191	2615	4570	3075	6600	2	103	219	1	2450	272	291	3715	3214				
	Values	11340	34302	50	41850	30 13	16520	477	7845	457	307	330	8	1030	1314	4	73	1088	582	1114	4821			140,167 75	

* To No. 2 add 11,400 lb. fresh cod, \$342; to this district add \$580 of dog-fish.

TURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., in the County of Inverness, Province of Nova Scotia, for the Year 1906.

Number.	DISTRICTS.				FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						LOBSTER PLANT.				KINDS OF FISH.					
	Vessels.				Boats.			Gill-nets.			Trawls.		Hand Lines.		Canneries.		Traps.		Salmon, fresh, lb.	Salmon, preserved in cans, lb.	Herring, salted, brls.	Herring, fresh, lb.	Mackerel, fresh, lb.	Mackerel, salted, brls.		
															Number.	Value.	Number.	Value.							Number.	Value.
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
<i>Inverness County.</i>																										
1				34	340	70	55	2825	1300	3	30	70	70	3	2000	6300	3650	15500	400	155	50	...	...	64	1
2	Meat Cove to Fishing Cove.	18	220	1780	78	51	3125	107	158	4740	1327	23	230	390	497	4	1950	10200	4650	17270	...	1000	...	101	2	
3	Eastern Harbour to Cape Rouge	2	22	500	8	11	440	21	23	250	390	4	40	58	73	2	1100	4800	1360	3900	...	45	...	30	3	
4	Cheticamp Point and Lake.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Margaree district including Island and River	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Belle Cote.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	Doucett's and Delaney's Coves	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Sight Point to Mabon Harbour.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Port Hood to Seaside	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	Judique to Low Point	1	15	300	4	102	1280	145	140	4200	1400	150	560	170	170	2	2800	10500	6300	...	...	...	...	...	...
11	Port Hastings and Hawkesbury	2	23	300	6	31	560	56	46	1380	460	15	60	30	30	...	...	...	...	...	...	...	...	...	...
12	West Bay to River Dennis.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	Whycocomagh and Lake Ainslie.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals.		23	280	2880	96	605	13630	940	1164	44315	17067	590	3365	1733	1555	20	14520	55400	29980	113420	6064	3155	538750	132700	4271	
Values.		17013	909	14197	5387	15924	64065

Number.	DISTRICTS.	KINDS OF FISH.																			TOTAL VALUE OF ALL FISH.	Number.			
		Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Cod dried cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, dried, cwt.	Hake sounds, lb.	Pollock, cwt.	Hallbut, lb.	Trout, lb.	Smelts, lb.	Alwies or Gas- pereau, brls.	Eels, brls.	Oysters, brls.	Clams, brls.	Tom Cod or Frost fish, lb.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.			Fish as bait, brls.	Fish as manure, brls.	
<i>Inverness County.</i>																									
1	Meat Cove to Fishing Cove	21576	...	248	...	...	...	...	210	...	...	...	...	...	...	...	...	...	45	...	350	...	...	\$ cts.	1
2	Eastern Harbour to Cape Rouge..	36216	...	3985	20	...	...	185 260	80	1100	...	2000	...	30	...	25	...	575	1200	1375	2400	300	...	11,922 00	2
3	Cheticamp Point and Lake	12288	...	510	...	...	...	90 300	27	400	...	...	...	180	...	...	...	200	200	400	300	200	...	49,774 50	3
4	Margaree district including Island and River	21792	...	735	2	...	...	65	...	300 1500	...	15	30	...	...	50	...	60	68	145	165	160	...	11,508 50	4
5	Belle Cote	1200	...	1200	3	...	...	45 100	15	1200 500	...	...	...	...	...	...	...	40	25	150	200	30	...	15,778 25	5
6	Doucett's and Delaney's Coves	3888	...	710	...	...	...	50	5	580	...	...	...	...	...	...	...	30	20	130	170	40	...	12,567 50	6
7	Sight Point to Mabou Har- bour	211936	...	235	...	1800	...	37	...	...	...	1200	...	...	...	...	...	...	...	190	56	...	...	10,216 50	7
8	Port Hood to Seaside.	36096	...	1120	...	15400	550 1560	200	...	300	2600	...	...	10	...	...	...	10	...	400	110	...	...	55,976 10	8
9	Judique to Low Point.	45120	...	220	...	2700	80	...	...	3000	3400	...	...	33	...	...	...	5	...	...	220	...	...	24,851 00	9
10	Port Hastings and Haw- kesbury	...	400	8	...	240	5	...	...	10000	...	3600	...	21	...	...	...	1500	...	...	55	...	...	17,647 00	10
11	West Bay to River Dennis	...	1020	1020	...	...	...	...	...	...	...	...	...	60	750	...	3400	...	...	290	715	...	...	83,980 20	11
12	Whycocomagh and Lake Aanalie.	...	60	60	...	...	...	...	...	500	...	...	...	40	...	35	...	...	...	...	7	...	...	17,909 00	12
Totals.		393712	400	10051	25	10140	1345 2112	860	337	13580	5800	12815	30	404	750	122 3400	2420	1558	3080	4748	730	...	...	912 50	...
Values.....\$		98428	2000	50255	250	304	4707 5280	215 1011	...	1358	580	640	120	4040	4500	488	102	9680	3116	924	7122	365	...	312,983 05	...

RECAPITULATION.

Of the Yield and Value of the Fisheries of the Island of Cape Breton, for the Year 1906.

Kinds of Fish.	Quantity.	Rate.	Value.	Total Value.
		\$ cts.	\$ cts.	\$ cts.
Salmon, fresh..... Lb.	169,210	0 15	25,381 50	
" preserved in cans..... "	6,604	0 15	990 60	
" smoked..... "	3,600	0 20	720 00	27,092 10
Herring, salted..... Brls.	20,102	4 50	90,459 00	
" fresh..... Lb.	834,162	0 01	8,341 62	98,800 62
Mackerel, fresh..... "	472,948	0 12	56,753 76	
W. I. " salted..... Brls.	18,976	15 00	284,640 00	341,393 76
Lobsters, preserved in cans..... Lb.	917,184	0 25	229,296 00	
" fresh in shel..... Cwt.	13,008	5 00	65,040 00	294,336 00
Cod, dried..... "	55,526	5 00	277,630 00	
" fresh..... Lb.	266,400	0 03	7,992 00	
" tongues and sounds..... Brls.	155	10 00	1,550 00	287,172 00
Haddock, dried..... Cwt.	16,641	3 50	58,243 50	
" fresh..... Lb.	627,090	0 03	18,812 70	
" smoked finnan haddies..... "	228,000	0 06	13,680 00	90,736 20
Hake, dried..... Cwt.	3,206	2 50	8,015 00	
" fresh..... Lb.	6,000	0 02	120 00	
" sounds..... "	1,277	0 25	319 25	8,454 25
Pollock, fresh..... "	8,500	0 02	170 00	
"..... Cwt.	7,905	3 00	23,715 00	23,885 00
Halibut..... Lb.	87,130	0 10	8,713 00	
Trout..... "	207,35	0 10	2,073 50	
Shad..... Brls.	37	10 00	370 00	
Smelts..... Lb.	59,115	0 05	2,955 75	
Alewives..... Brls.	1,029	4 00	4,116 00	
Eels..... "	1,245	10 00	12,450 00	
Oysters..... "	1,037	6 00	6,222 00	
Clams..... "	370	4 00	1,480 00	
Flounders..... Lb.	250,700	0 03	7,521 00	
Tom-cod..... "	58,550	0 03	1,756 50	
Squid..... Brls.	3,914	4 00	15,656 00	
Coarse and mixed fish..... "	4,600	2 00	9,200 00	
Fish oil..... Galls.	27,444	0 30	8,233 20	
Fish as bait..... Brls.	11,955	1 50	17,932 50	
Fish as fertilizer..... "	730	0 50	365 00	
Dogfish..... "			580 00	99,624 45
Total for 1906.....				1,271,494 38
" 1905.....				1,338,880 25
Decrease.....				67,385 87

SESSIONAL PAPER No. 22

RECAPITULATION.

STATEMENT showing the Number and Value of Fishing Crafts, Nets, &c., in the **Island of Cape Breton**, for the Year 1906.

Articles.	Value.	Total.
	\$ cts.	\$ cts.
113 fishing vessels (2,101 tons) (594 men).....	48,630	
2,822 fishing boats (4,606 men).....	60,568	
14,870 gill-nets (334,031 fathoms).....	120,547	
8 seines (365 fathoms).....	1,090	
16 trap-nets.....	10,600	
3,152 trawls.....	16,945	
20 wiers.....	300	
136 smelt-nets.....	879	
11,270 hand lines.....	9,485	
60 lobster canneries (1,144 persons employed).....	53,820	269,044
151,363 " traps.....	103,965	
34 freezers and ice houses.....	16,845	157,785
1,389 smoke and fish houses.....	42,644	
414 piers and wharfs.....	109,111	
79 tugs, steamers and smacks.....	17,825	
		186,425
Total.....		613,254

NOVA SCOTIA, DISTRICT NO. 2.

RETURN showing the Number, Value of Vessels and Boats, and Nets, &c., in the County of Antigonish, Province of Nova Scotia, for the Year 1906.

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						LOBSTER PLANT.		KINDS OF FISH.				Number.		
		Vessels.			Boats.			Gill Nets.			Trap Nets.		Trawls.		Hand Lines.		Can-neries.	Value.	Salmon, fresh, lb.		Herring, fresh, lb.	Mackerel, fresh, lb.
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.							Value.
1	<i>Antigonish County.</i>	17	200	4	78 2031	89	380	7480 1393	3	500	67	228	136	68	1	1000	5500	367	71200	2077	1	
2					55 1147	62	109	2080 597	22	4000	29	118	66	32	1	1000	37050	77	14400	2550	2	
3					46 720	69	120	2400 659	9	1400	39	202	53	26	2	2200	14400	53	8300	1200	3	
4					24 371	41	69	1410 339	2	400	29	155	23	11	1	700	7000	40	5400	2400	4	
5					25 420	30	71	1456 354	4	600	31	145	17	8	1	1400	9000	27	18700	100	5	
	Totals	1	17	200	4	228 4689	291	749	14826 3342	40	6900	195	848	295	145	6	6300	72950	564	118000	8327	
	Values.																		14590	2538	1180	999

[illegible]

Return showing the Number of Vessels, Boats, Nets, &c., in the County of Colchester, Province of Nova Scotia, for the Year 1906.

DISTRICTS.	FISHING BOATS.			FISHING GEAR OR MATERIALS.								LOBSTER PLANT.		KINDS OF FISH.			Number.			
	Boats.			Gill Nets.			Trawls.		Wiers.		Smelt Nets.		Hand Lines.		Canneries.	Salmon, fresh, lb.		Lobsters, preserved in cans, lb.	Cod, dried, cwt.	
	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.						
<i>Colchester County.</i>																				
1 Sterling.....	22	550	22	265	6100	1425	7	250	2	100	13	195	12	10	2	2000	33264	20500	210	1
2 Stewiacke.....	135	1325	245	265	6100	1425	7	250	2	100	13	195	12	10	2	2000	33264	1350	310	2
3 Five Islands.....	7	210	14	6	1800	240	6	1800	1	50	6	1800	12	10	1	50	2025	11790	26530	3
4 Economy.....	6	240	12	6	1800	240	6	1800	1	50	6	1800	12	10	1	50	2025	11790	26530	4
5 Little Bass River to Highland Village.....	9	350	18	9	2900	540	9	2900	1	50	9	2900	16	4800	900	11790	11790	26530	11790	5
6 Great Village to Queen's Village.....	16	500	32	16	4800	900	16	4800	3	150	13	195	12	10	2	2000	62195	26530	26530	6
Totals.....	195	3175	343	296	15600	3105	7	250	3	150	13	195	12	10	2	2000	62195	33264	62195	221
Values.....\$																	12439	8316	12439	1105

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Colchester, Province of Nova Scotia, for the Year 1906.

Number.	DISTRICTS.	KINDS OF FISH.														TOTAL VALUE OF ALL FISH.	Number.
		Haddock, fresh, lb.	Haddock, dried, cwt.	Hake, dried, cwt.	Halibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.	Alewives or Gas- pereau, brls.	Bass, lb.	Oysters, brls.	Clams, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
<i>Colchester County.</i>																	
1	Sterling					900	20	7990	105	3000	200				300	10,065 50	1
2	Stewiacke					1000						150	175	30		5,507 50	2
3	Five Island	3200	18	10	3500	1000	6									1,969 00	3
4	Economy		3			1000							12	6		1,543 10	4
5	Little Bass River to Highland Village.					700	15			150		600				3,793 00	5
6	Great Village to Queen's Village.						40									5,706 00	6
	Totals	3200	21	10	3500	12600	81	7990	105	3150	200	750	187	36	300		
	Values	96	73	25	350	1260	810	399	420	315	1200	1500	56	54	150	28,584 10	

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., also the Kinds of Fish, in the County of Cumberland, Province of Nova Scotia, for the Year 1906.

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.								LOBSTER PLANT.		KINDS OF FISH.			Number.				
	Vessels.			Boats.			Gill-nets.			Trawls.		Wiers.		Smelt nets.		Hand lines.		Canneries.			Salmon, fresh, lb.	Herring, salted, brls.	Herring, fresh, lb.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.						
Cumberland County.																								
1	Pugwash, Gulf Shore and Malagash.....	3	51 1000	7	65 1521	75	89	1770	420	...	...	...	14	465	...	24	21575	...	75	...	750000	1
2	Port Philip, Northport and Amherst Shore				58 1540	94	254	7620	1430	22	660	...	7	140	...	8	775	...	...	...	...	2
3	Wallace.....				19 301	19	...	...	...	...	...	...	10	235	...	...	...	...	10	...	...	3
4	River Philip.....				10 100	10	10	200	75	...	...	...	40	1600	...	...	...	1000	...	...	...	4
5	LaPlanche, Nappan and Maccan.....				14 280	28	80	3200	640	...	...	...	130	228	...	...	...	...	...	...	...	5
6	Minudie to Apple River.....				12 180	24	30	1080	216	1	30	...	...	...	...	...	...	1200	500	...	...	6
7	Advocate.....				9 370	18	10	600	150	1	30	...	...	...	...	...	...	600	...	...	...	7
8	Spencer's Island.....				13 260	30	20	400	80	1	25	...	...	...	...	...	...	50	...	...	...	8
9	Port Greville.....				17 1125	42	17	800	160	1	25	...	...	...	...	...	...	40	...	...	...	9
10	Parrsboro' and Two Islands.....				...	...	...	680	136	2	55	...	...	...	...	...	...	1550	40	...	...	10
	Totals.....	3	51 1000	7	217 5677	340	537	16350	3307	28	825	3	170	201 2668	378	32	22350	3750	1285	750000				
	Values.....																	750	5782	7500				

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RETURN showing the Kinds and Quantities of Fish and Fish Products, in the County of Cumberland, Province of Nova Scotia, for the Year 1906.

Number.	DISTRICTS.	KINDS OF FISH.																	TOTAL VALUE OF ALL FISH.	Number.			
		Herring, smoked, lb.	Mackerel, fresh, lb.	LoBSTERS, preserved in cans, lb.	LoBSTERS, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, fresh, lb.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.	Alwives or (ras- pereau, brls.	Bass, lb.	Fls, lb.	Oysters, brls.	Flounders, lb.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.
1	<i>Cumberland County.</i>	Pugwash, Gulf Shore and Malagash.	2900	330576	..	30	..	..	..	..	..	19500	20	..	..	180	..	..	..	820	330	87,009 50
2		Port Philip, Northport and Amherst Shore.	70000	33396	30	..	..	..	..	..	..	8000	165	..	..	133	..	49	..	300	..	18,009 00
3		Wallace.	..	..	..	..	..	..	..	..	..	10000	..	..	15	..	..	..	..	..	..	2,056 00
4		River Philip.	..	..	..	..	..	..	..	100	..	25000	..	..	..	..	..	..	..	..	..	1,700 00
5		LaPlanche, Nappan and Maccan.	..	..	45	26 5000	35	100	1500	250	..	1000	165	..	..	..	..	..	50	..	..	710 00
6		Minadie to Apple River.	..	..	100	10 5000	10	400	500	..	..	..	..	..	..	..	..	..	35	..	..	5,775 00
7		Advocate.	..	..	10	5 2000	20	1000	200	..	..	..	..	..	..	..	..	1000	..	10	20	3,730 50
8		Spencer's Island.	..	..	8	12	..	1000	150	..	..	..	..	..	..	..	..	..	..	..	..	576 00
9		Port Greville.	..	..	..	51	200	8	300	1000	..	..	..	50	..	..	..	650	..	40	7	354 00
10		Parrsboro and Two Islands.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,024 00
		Totals.	70000	3500	363972	193	134	9200	73	2800	3450	250	63500	350	50	15	328	1650	49	155	827	650	120,944 00
		Values	1400	420	90993	1351	670	276	219	280	345	2500	3175	1400	5	150	1968	49	98	46	1240	325	120,944 00

Return showing the Kinds and Quantities of Fish Products in the County of Guysborough, Province of Nova Scotia, for the year 1906.

DISTRICT.	SALMON.		HERRING.		MACKEREL.		LOBSTERS.		COD.		HADDOCK.		HAKE.				
	Fresh, lb.	Preserved in cans, lb.	Salted, brls.	Fresh, lb.	Smoked, lb.	Fresh, lb.	Salted, brls.	Preserved in Cans, lb.	Fresh in Shell, cwt.	Dried, cwt.	Tongues and Sounds, brls.	Fresh, lb.	Dried, cwt.	Smoked Finnan Haddock, lbs.	Dried, cwt.	Sounds, lb.	
Guysborough County.																	
1	Ecum Secum.....	1200	100	160	1000	150	10	10560	75	190	2	500	15	.....	5	.....	1
2	Marie Joseph.....	120	.....	80	600	100	3	.....	.....	200	2	400	20	.....	4	.....	2
3	Liscomb and Spanish Ship Bay.....	900	200	300	2000	200	5	29520	263	400	3	500	50	.....	6	.....	3
4	Gegogin.....	2500	500	120	800	50	2	13008	127	150	1	300	12	.....	.....	.....	4
5	St. Mary's Bay and River.....	12000	100	160	1000	75	1	.....	.....	40	.....	300	5	.....	.....	.....	5
6	Wine Harbour.....	1000	100	200	800	150	2	.....	.....	60	.....	400	20	.....	.....	.....	6
7	Port Hilford and Lake.....	6000	600	300	1800	200	15	.....	.....	100	.....	600	25	.....	.....	.....	7
8	Hollands Harbour and Indian River.....	300	.....	130	300	300	23	.....	.....	28	.....	100	3	.....	.....	.....	8
9	Port Beckerton.....	220	100	400	1000	500	50	18912	105	320	2	5000	85	.....	10	.....	9
10	Fishermans Harbour.....	200	.....	450	1000	500	70	20716	120	75	.....	400	15	.....	.....	.....	10
11	Country Harbour.....	1500	200	120	500	.....	.....	.....	.....	25	.....	.....	5	.....	.....	.....	11
12	Isaac Harbour.....	1400	.....	350	1500	1000	20	25324	43	250	1	500	25	.....	10	.....	12
13	Drum Head.....	200	.....	320	1500	3000	100	20640	52	450	3	20000	120	.....	35	.....	13
14	Seal Harbour.....	100	.....	320	1000	1000	35	14748	17	260	1	1000	50	.....	.....	.....	14
15	Coddles Harbour.....	300	.....	100	600	300	12	9408	31	750	3	500	20	.....	25	.....	15
16	New Harbour.....	.....	.....	600	1000	1000	250	15888	15	420	.....	600	200	.....	45	.....	16
17	Tor Bay.....	.....	.....	180	.....	.....	100	.....	.....	.....	.....	.....	65	.....	30	17	17
18	Larry's River.....	.....	.....	1190	.....	.....	320	.....	.....	1100	.....	.....	329	.....	110	.....	18
19	Charlo's Cove.....	.....	.....	958	.....	.....	198	37104	64	860	.....	.....	239	.....	65	145	19
20	Cole Harbour.....	.....	.....	480	.....	.....	130	.....	.....	410	.....	20000	215	.....	96	85	20
21	Port Felix.....	280	.....	1290	.....	30800	450	11332	6	1600	.....	90000	976	.....	210	170	21
22	Whitehead.....	1000	.....	960	.....	45504	300	45504	423	2185	.....	10000	772	2900	600	500	22
23	Raspberry and Dover.....	.....	.....	270	30000	16600	100	60288	260	1600	.....	10000	940	.....	80	75	23
24	Canso and Canso Tittle.....	30000	6000	1150	353000	962500	2300	78528	89†	9450	40	4087900	1590	725000	2860	5640	24

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Guysborough, Province of Nova Scotia,
For the Year 1906—Continued.

DISTRICTS.	SALMON.			HERRING.			MACKEREL.		LOBSTERS.		COD.		HADDOCK.			HAKE.		Number.	
	Fresh, lb.	Preserved in Cans, lb.	Smoked, lb.	Salted, brls.	Fresh, lb.	Smoked, lb.	Fresh, lb.	Salted, brls.	Preserved in Cans, lb.	Fresh in Shell, cwt.	Dried, cwt.	Tongues and Sounds, brls.	Fresh, lb.	Dried, cwt.	Smoked Finnan Haddock, lbs.	Dried, cwt.	Sounds, lb.		
Guysborough County.																			
25 Fox Island Main	2000	.....	.....	50	4000	.....	12300	137	.....	.....	140	.....	9000	45	.....	80	.....	25
26 Half Island Cove	2500	.....	.....	145	200000	.....	128500	956	.....	.....	1180	.....	136500	340	6800	435	500	26
27 Phillips Harbour	180	.....	.....	100	27000	.....	35430	178	.....	.....	460	.....	31800	190	.....	63	49	27
28 Queensport	1000	.....	.....	156	100000	.....	182500	430	31776	56	879	.....	403000	200	20000	235	100	28
29 Peas Brook .....	.....	.....	.....	282	80500	.....	21200	120	.....	.....	290	.....	11300	190	.....	85	84	29
30 Half-Way Cove .....	.....	.....	.....	240	18000	.....	21150	450	.....	.....	450	.....	23400	215	.....	229	170	30
31 Sandy Cove and Cook's Cove	6480	.....	.....	145	32000	.....	51500	290	.....	.....	240	.....	5080	140	.....	52	36	31
32 Guysboro and Manchester	4980	.....	.....	112	88000	.....	7800	180	.....	.....	36	.....	20000	18	.....	23	70	32
33 Port Shoreham	1400	.....	.....	100	2700	.....	16500	234	.....	.....	226	.....	7300	139	.....	9	.....	33
34 St. Francis .....	.....	.....	.....	350	13200	.....	54560	250	.....	.....	194	.....	19600	12	.....	285	300	34
35 Oyster Ponds .....	.....	.....	.....	160	30000	.....	13440	458	60	.....	60	.....	5000	17	.....	.....	.....	35
36 Sand Point	460	.....	.....	150	.....	.....	2750	460	.....	.....	65	.....	1000	7	.....	7	.....	36
37 Steep Creek	450	30000	10200	1000	100	10200	20	34	12	37
38 Mulgrave and Aulds Cove .....	.....	.....	.....	105	.....	.....	90000	160	44064	.....	100	.....	175000	20	45000	15	.....	38
Totals	77760	200	8800	13163	1024800	.....	1668255	9799	487220	2551	25543	59	5097180	6649	799700	5563	6026	
Values	15552	30	1760	59233	10248	.....	199950	146985	121805	17857	127715	590	152915	23271	47982	13907	1506	

7-8 EDWARD VII., A. 1908

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Guysborough, Province of Nova Scotia,
for the Year 1906.

Number.	Districts.	Pollock, cwt.	Halibut, lb.	TROUT, lb.	Shad, brls.	Smelts, lb.	Alwives or Gaspereau, brls.	Bass, lb.	Eels, brls.	Clams, brls.	Flounders, lb.	Tom Cod or Frost Fish, lb.	Squid, brls.	Coarse and Mixed fish, brls.	Fish Oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal Skins, number.	TOTAL VALUE OF ALL FISH. \$	Number.
<i>Guysborough County.</i>																				
1	Ecum Secum.....	10	800	400	.....	4000	1	.....	50	8	1000	900	.....	25	180	100	350	.....	6,729 00	1
2	Marie Joseph.....	8	1400	100	.....	300	.....	.....	40	8	1000	600	.....	15	190	100	60	.....	2,485 25	2
3	Liscomb and Spanish Ship Bay	20	2400	500	.....	2000	1	100	10	20	1500	1000	.....	10	375	300	400	8	14,656 50	3
4	Geggin.....	5	400	300	.....	.....	.....	.....	25	10	600	500	.....	10	120	80	180	.....	6,805 00	4
5	St. Mary's Bay and River.....	3	300	3800	1	3000	1	200	.....	4	600	500	.....	4	30	75	30	.....	4,783 00	5
6	Wine Harbour.....	4	400	.....	.....	.....	.....	.....	10	4	500	400	.....	6	40	70	60	.....	1,904 00	6
7	Port Hilford and Lake.....	6	2200	300	.....	9000	.....	200	16	.....	600	500	.....	10	80	80	50	.....	4,662 50	7
8	Holland's Harbour and Indian River.....	3	100	300	.....	.....	.....	.....	3	4	800	300	.....	6	20	75	50	2	1,460 50	8
9	Port Beckerton.....	9	300	.....	.....	.....	3	.....	5	10	1000	400	.....	16	280	100	270	4	10,827 50	9
10	Fisherman's Harbor.....	6	200	.....	120	.....	4	.....	2	15	800	400	.....	8	60	120	260	2	10,116 00	10
11	Country Harbour.....	1	.....	800	400	.....	2	100	15	1	200	100	.....	3	15	60	.....	.....	1,410 00	11
12	Isaac's Harbour.....	30	5000	500	300	.....	3	.....	20	3	800	300	.....	18	200	120	330	.....	11,656 50	12
13	Drum Head.....	120	14000	200	.....	.....	8	.....	10	.....	400	800	.....	25	325	150	200	3	9,281 75	13
14	Seal Harbour.....	100	1000	200	100	.....	2	.....	4	2	400	600	.....	15	220	100	300	2	10,654 50	14
15	Coddies Harbour.....	100	1000	100	100	.....	1	150	15	3	300	400	.....	10	150	80	198	.....	6,448 00	15
16	New Harbour.....	500	5000	600	.....	5000	5	.....	15	.....	600	1000	.....	30	600	120	240	.....	16,802 50	16
17	Tor Bay.....	188	385	600	.....	.....	4	.....	15	.....	.....	.....	.....	40	750	150	45	.....	10,275 50	17
18	Larry's River.....	498	6800	1100	.....	400	16	.....	80	.....	.....	.....	20	150	2200	475	60	.....	92,047 00	18
19	Charles Cove.....	582	1240	970	.....	350	9	.....	60	.....	.....	.....	10	35	1430	220	80	.....	25,899 75	19
20	Cole Harbour.....	100	1800	1500	.....	.....	25	.....	100	.....	.....	.....	12	35	1260	250	40	.....	10,244 75	20
21	Port Felix.....	534	2120	1500	.....	375	427	.....	90	.....	.....	.....	40	50	1990	480	200	.....	33,887 25	21
22	Whitehead.....	468	1000	600	.....	400	65	.....	60	.....	.....	.....	90	110	2500	620	600	.....	50,188 00	22
23	Raspberry and Dover.....	1080	280	.....	.....	200	5	.....	40	.....	.....	.....	20	30	1380	320	800	.....	36,389 75	23
24	Canso and Canso Tittle.....	28700	45700	1500	10	2000	175	4000	100	4000	8000	120	40600	900	10000	5,627 17	24
25	Fox Island Main.....	40	60	40	400	60	100	6,223 50	25

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Guysborough, Province of Nova Scotia, for the Year 1906—*Continued.*

DISTRICTS.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.	Alewives or Gaspereau, brls.	Bass, lb.	Beils, brls.	Clams, brls.	Flounders, lb.	Tom Cod or Frost Fish, lb.	Squid, brls.	Coarse and Mixed Fish, brls.	Fish Oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal Skins, number.	TOTAL VALUE OF ALL FISH.	Number.
<i>Guysborough County.</i>																			
26 Half Island Cove.....	350	.....	.....	.....	.....	30	.....	.....	.....	.....	.....	320	400	1260	200	400	.....	49,846 00	26
27 Philip's Harbour.....	20	.....	300	.....	.....	.....	.....	10	.....	.....	.....	10	100	.....	120	200	.....	12,590 35	27
28 Queen's Port.....	150	.....	200	.....	.....	26	.....	20	.....	.....	.....	400	200	2800	250	400	.....	61,804 80	28
29 Peas Brook.....	50	.....	400	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,998 00	29
30 Half Way Cove.....	102	.....	600	.....	.....	1	.....	30	.....	.....	.....	28	70	675	140	60	.....	16,531 50	30
31 Sandy Cove and Cook's Cove.....	965	.....	400	.....	4000	6	.....	40	.....	.....	.....	19	100	860	280	80	.....	18,877 90	31
32 Guysboro and Manchester.....	144	.....	1000	.....	3600	10	50	45	.....	.....	.....	18	80	190	160	20	.....	8,286 00	32
33 Port Shoreham.....	12	.....	.....	.....	.....	4	.....	30	.....	.....	.....	.....	10	100	60	10	.....	8,719 50	33
34 St. Francis.....	20	.....	.....	.....	.....	10	.....	25	.....	.....	.....	.....	30	220	160	20	.....	15,117 70	34
35 Oyster Ponds.....	.....	.....	.....	.....	.....	14	.....	35	.....	.....	.....	30	50	250	160	15	.....	10,960 80	35
36 Sand Point.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100	60	80	40	20	.....	8,916 00	36
37 Steep Creek.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50	180	50	40	.....	20,610 00	37
38 Mulgrave and Andis Cove.....	60	.....	100	.....	2000	.....	.....	50	.....	.....	.....	1700	.....	100	75	10	.....	40,983 50	38
Totals.....	3501 4	92625	18970	11	37445	860	4800	1105	82	15100	8700	11077	2026	62790	6980	16203	26	.....	.....
Values.....\$	105042	9262	1897	110	1872	3440	480	11050	16 4	453	261	44308	4052	18837	10470	8101	32	1,161,141 75	.....

RETURN showing the Number of Vessels, Boats and Nets, &c., in the County of **Halifax**, Province of **Nova Scotia**,
for the Year 1906.

FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.										LOBSTER PLANT.																
Vessels.					Boats.					Gill-nets.					Seines.					Trawls.					Smelt-nets.					Hand lines.					Canneries.	
Number.		Tonnage.		Value.		Men.		Number.		Value.		Men.		Number.		Fathoms.		Value.		Number.		Fathoms.		Value.		Number.		Value.		Number.		Value.				

SESSIONAL PAPER No. 22

RETURN showing the Number of Vessels, Boats and Nets, &c., in the County of **Halifax**, Province of **Nova Scotia**,
for the Year 1906—*Continued*.

Number.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.										LOBSTER PLANT.	
	Vessels.		Boats.		Gill-nets.		Seine.		Trawls.		Smelt-nets.		Hand lines.		Canneries.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.
<i>Halifax County.</i>																
24	1	14	300	4	77	1,700	64	250	15,000	1,100	5	4,320	790	.....	.....	.....
Head	1	14	300	4	77	1,700	64	250	15,000	1,100	5	4,320	790	.....	.....	.....
25	1	14	150	5	20	420	16	76	4,560	360	.....	.....	.....	.....	.....	.....
West Ship Harbour	1	14	150	5	20	420	16	76	4,560	360	.....	.....	.....	.....	.....	.....
26	1	13	700	4	25	905	31	107	2,140	428	.....	.....	.....	.....	.....	.....
East Ship Harbour	1	13	700	4	25	905	31	107	2,140	428	.....	.....	.....	.....	.....	.....
27	4	59	1,550	15	47	1,974	48	253	5,060	1,012	.....	.....	.....	.....	.....	.....
Pleasant Harbour and Tangier	4	59	1,550	15	47	1,974	48	253	5,060	1,012	.....	.....	.....	.....	.....	.....
28	2	39	1,440	10	31	1,015	28	178	3,560	712	2	180	200	.....	.....	.....
Pope's Island and Gerard's Island	2	39	1,440	10	31	1,015	28	178	3,560	712	2	180	200	.....	.....	.....
29	3	43	800	9	82	3,069	97	571	10,220	2,044	.....	.....	.....	.....	.....	.....
Spry Bay, Taylor's Head and Mushaboom	3	43	800	9	82	3,069	97	571	10,220	2,044	.....	.....	.....	.....	.....	.....
30	3	63	2,475	13	30	924	33	171	3,421	684	3	295	370	.....	.....	.....
Sheet Harbour and Sober Island	3	63	2,475	13	30	924	33	171	3,421	684	3	295	370	.....	.....	.....
31	.....	.....	.....	.....	6	160	6	24	480	96	.....	.....	.....	.....	.....	.....
Beaver Harbour and Port Dufferin	.....	.....	.....	.....	6	160	6	24	480	96	.....	.....	.....	.....	.....	.....
32	.....	.....	.....	.....	13	261	16	22	440	88	.....	.....	.....	.....	.....	.....
Quoddy and Harrigan Cove	.....	.....	.....	.....	13	261	16	22	440	88	.....	.....	.....	.....	.....	.....
33	.....	.....	.....	.....	3	45	3	6	120	24	.....	.....	.....	.....	.....	.....
Moser River and Smith's Cove	.....	.....	.....	.....	3	45	3	6	120	24	.....	.....	.....	.....	.....	.....
34	.....	.....	.....	.....	22	256	12	42	840	168	4	235	145	.....	.....	.....
Mitchell's Bay and Ecum Secum	.....	.....	.....	.....	22	256	12	42	840	168	4	235	145	.....	.....	.....
Totals.	72	1,784	55,815	413	2,548	51,639	2,373	13,899	353,281	64,721	388	42,390	83,935	1,186	5,186	19,30,550

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Halifax, Province of Nova Scotia,
for the Year 1906—Continued.

DISTRICTS.	SALMON.			HERRING.			MACKEREL.		LOBSTERS.		COD.	HADDOCK.			HAKE.		Number.
	Fresh, lb.	Preserved in cans, lb.	Smoked, lb.	Salted, brls.	Fresh, lb.	Smoked, lb.	Fresh, lb.	Salted, brls.	Preserved in cans, lb.	Fresh in shell, cwt.		Fresh, lb.	Dried, cwt.	Smoked finnan haddies, brls.	Dried, cwt.	Sounds, lb.	
<i>Halifax County.</i>																	
25 West Ship Harbour.....	.....	.....	.....	118	.....	.....	.....	13	.....	.....	127	.....	18	.....	.....	.....	25
26 East Ship Harbour.....	.....	.....	.....	230	.....	.....	.....	3	.....	.....	260	.....	22	.....	20	24	26
27 Pleasant Harbour and Tangier	500	.....	.....	1290	.....	.....	.....	42	.....	.....	935	.....	120	.....	75	112	27
28 Pope's Harbour and Gerrard's Island.....	.....	.....	.....	1106	.....	.....	.....	8	26592	.....	282	.....	40	.....	90	100	28
29 Spry Bay, Taylor Head and Mushaboom.....	400	.....	.....	3933	.....	.....	.....	25	38688	396	633	.....	33	.....	81	100	29
30 Sheet Harbour and Sober Is- land.....	700	.....	.....	610	.....	.....	.....	4	.....	35	357	.....	17	.....	89	600	30
31 Beaver Harbour and Port Dufferin.....	200	.....	.....	50	.....	.....	.....	1	60096	614	48	.....	2	.....	.....	.....	31
32 Quoddy and Harrigan Cove.....	600	.....	.....	35	.....	.....	.....	3	65472	1100	180	.....	4	.....	.....	.....	32
33 Moser River and Smith's Cove	800	.....	.....	3	.....	.....	.....	.....	181	.....	35	.....	.....	.....	.....	.....	33
34 Mitchell's Bay and Ecum Secum.....	.....	.....	.....	250	.....	.....	.....	2	62928	432	140	.....	5	.....	.....	.....	34
Totals	29120	.....	9875	26942	114500	6000	1403000	2739	379632	7141	19417	72	2212	3000	2036	1304	
Values \$	5824	.....	1975	121239	1145	120	168360	41085	94908	49987	97085	720	7742	180	5090	326	

7-8 EDWARD VII., A. 1908

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Halifax, Province of Nova Scotia,
for the Year 1906—Continued.

Number.	Districts.	Pollock, cwt.	Hallibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.	Alwives or Gaspareau, brls.	Beis, brls.	Oysters, brls.	Clams, brls.	Flounders, lb.	Tom cod or frost fish, lb.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.	Total VALUE OF ALL FISH.	Number.
<i>Halifax County.</i>																				
1	North Shore.....	90	3000	.....	.....	.....	20	5	.....	30	5000	1000	30	20	70	46	26	1	16,728 25	1
2	East St. Margarets.....	300	1900	.....	.....	.....	3	10	.....	50	25000	5000	40	60	500	274	74	.....	42,982 00	2
3	Indian Harbour.....	200	7000	500	.....	.....	19	6	.....	60	26000	1000	60	25	550	240	40	.....	58,982 00	3
4	Peggy's Cove.....	50	6000	200	.....	.....	1	3	.....	12	9000	500	12	25	200	90	.....	.....	26,981 00	4
5	Dover.....	400	1000	300	.....	.....	29	2	.....	30	12000	2000	5	50	760	160	.....	.....	76,609 00	5
6	Prospect.....	200	1000	200	.....	.....	5	1	.....	60	3000	600	7	60	920	60	.....	.....	50,940 00	6
7	Terrence Bay.....	100	1100	600	.....	.....	7	3	.....	20	4000	500	6	10	400	90	120	.....	22,364 00	7
8	Pennant.....	60	5000	150	.....	.....	9	4	.....	18	2000	200	5	.....	600	76	.....	.....	18,635 00	8
9	Sambro.....	100	600	1100	.....	.....	3	1	.....	12	3000	400	10	20	500	74	300	.....	22,373 00	9
10	Ketch Harbour.....	90	700	175	.....	.....	40	1	.....	8	1000	200	12	10	300	60	.....	.....	14,532 50	10
11	Portuguese Cove.....	100	600	40	.....	.....	5	1	.....	10	1000	400	10	10	60	40	.....	2	16,920 50	11
12	Herring Cove.....	60	6000	60	.....	.....	.....	.....	.....	7	1000	1000	12	12	400	120	.....	.....	22,945 50	12
13	Ferguson's Cove.....	10	70	.....	.....	.....	.....	2	.....	2	1000	100	2	.....	40	10	.....	.....	2,219 00	13
14	Halifax.....	.....	1000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	323 00	14
15	Bedford.....	3	290	.....	.....	.....	27	2	.....	12	100	100	2	.....	.....	2	.....	.....	698 00	15
16	Eastern Passage and Devil's Island.....	150	8180	.....	.....	.....	7	6	.....	60	8000	.....	.....	.....	247	128	.....	.....	19,499 10	16
17	Cow Bay and Lawrencetown.....	35	420	.....	.....	2500	5	5	.....	300	2000	.....	.....	.....	33	13	.....	.....	2,482 40	17
18	Seaforth and Three Fathom Harbour.....	6	280	400	.....	15000	8	7	.....	600	5000	.....	.....	.....	17	8	.....	.....	5,121 60	18
19	West Chezetcook.....	28	6900	200	.....	10000	7	7	.....	1450	8000	.....	.....	.....	900	256	.....	.....	25,778 50	19
20	East Chezetcook.....	17	660	700	.....	1400	4	9	.....	980	8000	.....	.....	.....	47	24	.....	.....	4,191 60	20
21	Petpeswick Harbour.....	107	2950	1500	.....	300	.....	12	.....	200	5000	.....	.....	.....	190	90	250	.....	18,265 00	21
22	Musquodoboit Harbour.....	59	1300	1200	.....	15000	.....	12	3	660	6000	.....	.....	.....	266	120	.....	.....	8,994 30	22
23	Jeddore.....	277	3000	400	.....	2500	.....	15	.....	750	9000	.....	.....	.....	720	208	.....	.....	17,443 00	23
24	Clam Harbour and Owl's Head.....	25	4270	350	.....	1500	.....	5	.....	800	13000	.....	.....	.....	146	54	500	.....	27,259 80	24

SESSIONAL PAPER No. 22

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Halifax, Province of Nova Scotia, for the Year 1906—Concluded.

Number.	DISTRICTS.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.	Alewakes or Gaspereau, brls.	Eels, brls.	Oysters, brls.	Clams, brls.	Flounders, lb.	Tom cod or frost fish, lb.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.	TOTAL VALUE OF ALL FISH.	Number.
<i>Halifax County.</i>																				
25	West Ship Harbour.	131	860	250	.....	1000	15	5	.....	20	5000	.....	.....	.....	53	22	.....	.....	1,972 90 25	25
26	East Ship Harbour.	30	3130	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	197	16	.....	.....	3,003 10 26	26
27	Pleasant Harbour and Tangier	75	3140	.....	.....	.....	.....	.....	.....	14	.....	.....	.....	.....	672	48	.....	.....	12,686 10 27	27
28	Pope's Harbour and Gerrard's Island.	30	1350	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	376	22	260	37	14,098 05 28	28
29	Spry Bay, Taylor Head and Mushaboom.	80	2030	.....	.....	.....	.....	60	.....	17	.....	.....	.....	.....	526	17	1130	.....	36,230 80 29	29
30	Sheet Harbour and Sober Is- land.	6	3170	.....	.....	1600	.....	1	.....	1	.....	.....	.....	.....	199	21	.....	.....	7,423 20 30	30
31	Beaver Harbour and Port Dufferin	2	380	.....	.....	.....	.....	12	.....	1	.....	.....	.....	.....	20	3	600	40	20,375 50 31	31
32	Quoddy and Harrigan Cove.	.....	280	.....	.....	.....	.....	40	.....	3	.....	.....	.....	.....	145	3	650	.....	26,111 50 32	32
33	Moser River and Smith's Cove.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	1	.....	.....	1,861 80 33	33
34	Mitchell's Bay and Ecum Secum.	3	700	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	65	3	620	.....	2,045 50 34	34
Totals.....		2706	77670	13615	.....	50800	200	237	3	6194	162100	13000	213	302	10135	2459	4570	80	.....	.....
Values		8118	7767	1361	.....	2540	800	2370	18	12388	4863	390	852	604	3040	3688	2285	100	668,166 50	.....

RETURN showing the Number of Vessels, Boats, Nets, &c., and the Quantity and Value of all Fish in the County of Hants, Province of Nova Scotia, for the Year 1906.

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						KINDS OF FISH.						TOTAL VALUE OF ALL FISH.	Number.						
	Vessels.			Boats.			Gill Nets.			Wiers.			Hand Lines.		Salmon, fresh, lb.	Herring, salted, brls.	Cod, dried, cwt.	Pollock, cwt.			Trout, lb.	Shad, brls.	Alewives or Gaspe- reau, brls.	Tom Cod or Frost Fish, lb.		
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.													
<i>Hants County.</i>																										
1	Noel to Maitland.	...	...	...	4	160	6	4	400	120	...	...	...	...	1600	20	...	800	...	...	...	...	...	...	500 00	1
2	Maitland to Shubenacadie	...	...	...	40	560	50	80	2400	800	...	...	...	...	12000	...	...	350	...	120	...	...	...	...	2,915 00	2
3	Shubenacadie to Grand Lake	...	...	...	60	480	60	80	800	720	...	...	...	...	6000	...	...	1000	...	130	...	...	...	...	1,920 00	3
4	Hantsport to Windsor	...	...	...	5	250	5	5	500	250	...	...	...	50	40	700	15	...	...	2	...	...	...	...	235 00	4
5	Windsor to Noel.	2	80	800	5	12	500	15	18	1900	540	1	75	60	50	6300	15	30	12	...	20	10	1000	...	1,783 50	5
Totals		2	80	800	5	121	1950	136	187	6000	2430	1	75	130	90	26600	15	65	12	2150	32	260	1000	...	...	...
Values.		...	...	...	...	...	...	...	...	...	...	...	...	...	...	5300	67	325	36	215	320	1040	30	...	7,353 50	...

Number.	Districts.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.						LOBSTER PLANT.		KINDS OF FISH.							
		Vessels.		Boats.		Gill nets.			Trawls.			Smelt Nets		Canneries.		Salmon, fresh, lb.	Herring, salted, brls.	Herring, fresh, lb.	Mackerel, fresh, lb.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Fathoms.	Number.	Value.	Number.	Value.	Number.							Value.	
<i>Pictou County.</i>																					
1	West Pictou.....				155	\$875	164	116	3480	812	2	20	13	390	14	12100	900	80	11000	2500	
2	Pictou Island.....				55	2850	100	50	500	400					3	14850		110	47900	700	
3	Central Division.....				4	100	6	12	240	90	2	20	9	225				210	45000	300	
4	Southern Division.....				26	385	29	45	2684	1080	14	55	3	125	1	300	19300		30700	5300	
5	Merigomish Island.....				11	220	12	20	1180	630			12	580	1	700	5900		4500	200	
6	North Beach.....				12	150	12	24	780	405	4	20	13	750	2	1200	7000		5700	300	
7	Ponds.....				13	175	13	20	1600	600	3	15	16	850	1	1100	6300		4900	450	
8	Lismore.....				11	660	11	19	1650	700	5	25			1	300	3600		4400	250	
	Totals.....	1	16	900	3	8415	347	306	12014	4917	30	155	66	2920	23	30550	43000	400	154100	10000	
	Values.....\$																8600	1800	1541	1200	

RETURN showing the kinds and Quantities of Fish and Fish Products in the County of Pictou, Province of Nova Scotia, for the Year 1906.

DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.			
	Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, fresh, lb.	Hake, dried, cwt.	Trout, lb.	Smelts, lb.	Alewives or Gaspereau, brls.	Bass, lb.	Eels, brls.	Oysters, brls.	Clams, brls.	Tom cod or frost fish, lb.			Coarse and mixed fish, brls.	Fish as bait, brls.	Fish as manure, brls.
<i>Pictou County.</i>																		
1 West Pictou	256942	4	60	7200	40	300	10300	25	200	40	45	15	2800	18	600	2500	68 829 00	1
2 Pictou Island	166600		127		50	2000	12000		200	30	30					1500	43 468 00	2
3 Central Division			75	1900	120	300	1900	20		12						80	4 256 00	3
4 Southern Division	8832		165	1300	10	300	11300	20		16						35	8 335 50	4
5 Merigomish Island			11	1200	7		11300			25						25	2 130 00	5
6 North Beach	5280		8	1400	8		11100			18						35	3 772 50	6
7 Ponds	32880		6	1400	9	100	9750									27	10 415 50	7
8 Lisimore			5	1400	8											30	1 096 00	8
Totals	470534	4	457	7200	252	2700	56350	45	200	111	75	15	2800	18	752	4486		
Values	117634	28	2285	216	630	270	2817	180	20	1110	450	30	84	36	1128	2093	142 302 50	

SESSIONAL PAPER No. 22

RECAPITULATION.

OF the Yield and Value of the Fisheries in District No. 2, Nova Scotia, with comparative statements of the increase or decrease for the years 1905 and 1906.

Kinds of Fish.	Quantity, 1906.	Rate.	Totals.	QUANTITIES.	
				Increase.	Decrease.
		\$ cts.	\$ cts.		
Salmon, fresh..... lbs.	315,375	0 20	63,075 00	70,025	
" preserved in cans..... "	200	0 15	30 00		1,800
" smoked..... "	18,675	0 20	3,735 00	14,075	
Herring, salted..... brls.	42,369	4 50	190,660 50	12,194	
" fresh..... lbs.	2,161,400	0 01	21,614 00	1,109,200	
" smoked..... "	76,000	0 02	1,520 00		528,200
Mackerel, fresh..... "	3,091,082	0 12	370,929 84	1,187,177	
" salted..... brls.	12,700	15 00	190,500 00		1,582
Lobsters, preserved in cans..... lbs.	1,871,952	0 25	467,988 00		137,468
" fresh in shell..... cwt.	9,889	7 00	69,223 00		21,952
Cod, dried..... "	46,715	5 00	233,575 00		2,065
" tongues and sounds..... brls.	131	10 00	1,310 00		28
Haddock, fresh..... lbs.	5,823,880	0 03	174,716 40	652,880	
" dried..... cwt.	9,009	3 50	31,531 50		1,218
" smoked finnan haddies..... lbs.	802,700	0 06	48,162 00	159,200	
Hake, dried..... cwt.	8,912	2 50	22,280 00		4,536
" sounds..... lbs.	9,340	0 25	2,335 00		13,071
Pollock..... cwt.	37,826	3 00	113,478 00	4,569	
Halibut..... lbs.	176,595	0 10	17,659 50		670,995
Trout..... "	54,155	0 10	5,415 50		3,470
Shad..... brls.	374	10 00	3,740 00	44	
Smelts..... lbs.	221,885	0 05	11,094 25		39,525
Alewives or Gaspereau..... brls.	1,832	4 00	7,328 00		490
Bass..... lbs.	9,200	0 10	920 00		13,750
Eels..... brls.	1,527	10 00	15,270 00		33
Oysters..... "	685	6 00	4,110 00		251
Clams..... "	7,044	2 00	14,088 00	4,422	
Flounders..... lbs.	198,250	0 03	5,947 50		60,734
Tom cod..... "	25,500	0 03	765 00		176,250
Squid..... brls.	11,624	4 00	46,496 00		2,521
Coarse or mixed fish..... "	2,993	2 00	5,986 00		8,913
Fish oil..... galls.	74,582	0 30	22,374 60		14,476
Fish used as bait..... brls.	12,272	1 50	18,408 00		13,535
Fish products as fertilizer..... "	27,379	0 50	13,689 50		328,615
Seal skins..... No.	106	1 25	132 50		47
			2,200,087 59		

District No. 2, Nova Scotia.

RECAPITULATION.

SHOWING the Number and Value of Fishing Vessels, Boats, &c., in District No. 2, Province of Nova Scotia, for the Year 1906.

Material.	Value.	Total.
	\$	\$
143 vessels (3,002 tons)...	117,265	
5,544 boats.	152,890	270,155
33,434 gill nets (773,461 fathoms).....	251,887	
417 seines (45,419 fathoms).....	90,425	
104 seine spillers.....	11,400	
118 trap nets.....	37,820	
4,412 trawls.....	36,709	
28 weirs.....	675	
322 smelt bag nets.....	6,758	
10,118 hand lines.....	7,208	442,963
120 lobster canneries.....	121,600	
274,070 " traps.....	182,460	304,240
65 freezers and ice houses.....	228,780	
1,736 smoke and fish houses.....	173,844	
828 piers and wharfs.....	156,711	
28 tugs and smacks.....	62,150	619,525
Total.....		1,638,883

COMPARATIVE Statement of the Value of the Fisheries in each County of District No. 2, Province of Nova Scotia, for the years 1905 and 1906.

County.	Value in 1905.	Value in 1906.	Increase.	Decrease.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Antigonish	75,050 60	71,595 24		3,455 36
Colchester.....	25,723 50	28,584 10	2,860 60	
Cumberland.....	142,374 50	120,944 00		21,430 50
Guysborough	1,385,018 75	1,161,141 75		223,877 00
Halifax.....	635,704 85	668,166 50	32,461 65	
Hants.....	8,249 75	7,353 50		896 25
Pictou.....	149,029 50	142,302 50		6,727 00
Total for 1906.....	2,421,151 45	2,200,087 59	35,322 25	256,386 11
	2,200,087 59			35,322 25
Decrease.....	221,063 86			221,063 86

NOVA SCOTIA—*Continued.*

District No. 3.

FISHERY STATISTICS

COUNTIES OF LUNENBURG, QUEEN'S, SHELBURNE, YARMOUTH,
DIGBY, ANNAPOLIS AND KING'S.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., Quantity and Value of Fish in the County of Lunenburg, Province of Nova Scotia, for the Year 1906.

DISTRICTS.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.						LOBSTER PLANT.		KINDS OF FISH.					Number.						
	Vessels.		Boats.		Gill Nets.		Seines.		Trap-Nets.		Trawls.		Hand-Lines.		Canner-ies.		Salmon, fresh, lb.		Herring, salted, brls.	Herring, fresh, lb.	Mackerel, fresh, lb.			
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.						Value.		
Lunenburg Co.																								
1 Fox Point.....	1	16	350	5	115	2400	122	30	6000	1600	20	2000	8500	11	2000	9	65	100	70	400	300	300	1	
2 Mill Cove.....					200	3200	220	32	7000	2300	22	2500	1600	10	2000	7	60	10	7	100	300	400	2	
3 Lodge and N. W. Cove.....					70	1200	85	22	2900	370	16	2000	1600	4	1000	6	60			150	100	300	3	
4 Aspotogan.....					44	900	50	4	1000	200	7	800	700	4	600	4	30			200	100	4	4	
5 Bayswater and Blandford.....					170	2000	190	8	1800	375	15	1300	850	8	700	2	25	40	32	1100		25	5	
6 Deep Cove.....					20	150	24	10	800	900	4	500	400	2	180		5	8		100		20	6	
7 Chester Bay.....	1	40	900	5	140	2800	70	240	12500	3000	14	1000	2800	13	2700	1	12	20	10	500	2000	400	7	
8 Mahone Bay and Martin River.....	25	2000	85000	400	214	3000	230	250	13000	3500	12	900	2500	5	1050	46	400	100	80	200	1000	4000	8	
9 Little and Big Tan-cock Islands.....					375	8900	400	30	6600	1700	45	4400	2450	20	2100	15	160	210	190	4000	500	600	9	
10 Lunenburg Harbour to Kingsbury.....	62	5090	330900	962	*530	*14200	204	1400	28000	14000	6	600	1200	50	12500	300	13500	2000	1000	2570	10000	6300	10	
11 LaHave River District.....	51	4183	271900	733	*470	*12850	150	1450	29000	14500	8	800	2000	8	2000	250	11250	2500	1250	4700	12000	3000	11	
12 Petite Rivière to Port Medway..	2	76	5040	14	80	3400	138	800	1600	8000	2	200	400	2	500	5	225	600	300	1700	1400	200	12	
Totals.....	142	11405	694000	2119	1788	*45450	1883	4276	110200	50445	171	15000	25000	137	27330	645	25787	5585	2947	625	15780	27600	15645	
Values....\$																				6805	125	78900	276	1877

* 640 dories used by sailors and their values, \$9,550 are therein included.

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Lunenburg, Province of Nova Scotia, for the Year 1906.

Number.	Districts.	KINDS OF FISH AND FISH PRODUCTS.																TOTAL VALUE OF ALL FISH.	Number.							
		Macarel, salted, brls.	Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Hadcock, fresh, lb.	Hadcock, dried, cwt.	Hadcock, smoked, finnan haddies, lb.	Hake, dried, cwt.	Hake, sounds, lb.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Smelts, lb.	Alwives, or Gas- pereau, brls.	Bels, brls.			Clams, brls.	Flounders, lb.	Tom cod or frost fish, lb.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.
<i>Lunenburg Co.</i>																										
1	Fox Point.	100																							1	
2	Mill Cove.	150																							2	
3	Lodge and N. W. Cove.	250																							3	
4	Aspotogan	400	30000	1	10	65	50	35	22	27	5000					8	3		23000	300	100	40	80		4	
5	Bayswater and Blandford.	300		2	18	26	125	26	17	25	15000	25						12000	2000	50	10	60			5	
6	Deep Cove.	25		1	15	50	15	15	8	6								33000	2000	200	35	260			6	
7	Chester Bay.	200	48000	500	700	700	1000	25	200	10	100	12	400	400	500	42	5	5	8000	80	10	15	10		7	
8	Mahone Bay and Martin River.	25		10	20000	30	2506	60	400	5	100	170	15000	200	800	10	6	4	9000	4000	200	400	500		8	
9	Little & Big Tan- cock Islands.	300		23	142		600	280	35		40	1400						66000			900	150	1000	160	9	
10	Lunenburg H'br to Kingsbury.	2300	32750	1090	55350	50	4500	9380	1830		690	116000					10	8		3000		28500			10	
11	LaHave River District.	1700	13680	180	37290	28	8000	270			442	2000			7000		25	45		2500		20000			11	
12	Petite Riviere to Port Medway.	720		80	1200	5	900	18			60	400			1500		6	15		800		740			12	
Totals.		6470	124460	1906	115290	130	17875	10189	600	2060	220	1514	139700	675	9800	70	59	77	225000	13600	1963	50110	2465	170		
Values. . . \$		97050	31115	19060	576450	1300	536	35662	36	6180	55	4542	15970	67	490	280	590	154	6750	558	3926	15033	3698	85		

SESSIONAL PAPER No. 22

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Queen's, Province of Nova Scotia, for the Year 1906.

Number.	Name.	KINDS OF FISH.																	TOTAL VALUE OF ALL FISH.	Number.				
		Macquerel, salted, brls.	Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, fresh, lb.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lb.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.	Alwives or Gasper- eau, brls.	Bees, brls.	Clams, brls.	Flounders, lb.	Squid, brls.			Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Seal skins, No.
1	Port Medway.....	370			1650	600	100		54	1000	5800	5000	20	40	40			45	15		55	50	22,893 00	
2	Mill Village and Greenfield.....										5800	5000	90	16									4,044 00	
3	Liverpool, Brooklyn and Western Head.....	75		30	1530	4000	300	300	375	1000	200								5	1000			68,630 00	
4	Gull Islands, Summerville and White and Hunt's Points.....	120		15	1175	730	126		300		100								7	75	400		11,826 40	
5	Port Mouton and vicinity.....	75		1600	515		60		40	2500	300						500	10	11	90	100		47,638 00	
6	Ports Joli and Hebert.....	5		960	200	375	50	5	20	270	100	500		12		500			7	80	110		7,333 00	
7	Beach Meadows to Berlin.....	100		1400	765		425		80	400									10	125	50		37,805 00	
	Totals.....	745	91920	3245	6010	5330	1061	300	869	5170	6000	5	7500	113	68	40	1000	55	55	1370	715	50		200,169 40
	Values.....\$	11175	22980	32450	30050	160	3713	18	2507	517	660	50	375	452	680	80	30	220	110	411	1073	62		

RETURN showing the Number of Vessels, Boats, Nets, &c., in the County of Shelburne, Province of Nova Scotia, for the Year 1906.

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						LOBSTER PLANT.		KINDS OF FISH.					Number.		
	Vessels.			Boats.			Gill Nets.			Trawls.		Hand Lines.	Canneries.		Salmon, fresh, lb.	Herring, salted, brls.	Herring, fresh, lb.	Herring, smoked, lb.	Mackerel, fresh, lb.		Mackerel, salted, brls.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.		Value.	Number.								Value.
DISTRICTS.																						
Shelburne County.																						
1	9	98	2500	30	140	7400	180	665	20000	3550	...	300	300	2550	...	724	...	...	...	286	1
2	9	84	2100	22	92	3000	110	1080	31300	8600	...	300	300	2100	...	800	...	...	...	115	2
3	62	682	18600	240	500	35000	650	5000	84600	40000	...	2600	2600	2850	...	5953	...	...	...	76	3
4	6	200	8600	48	64	1920	64	430	7300	3530	...	300	300	...	...	110	...	...	...	...	4
5	16	186	5375	68	300	9000	300	4000	67800	32000	...	350	350	1	200	2484	...	...	...	90	5
6	4	61	2400	24	150	3800	102	2400	41300	19400	...	300	300	2	400	1897	...	...	...	...	6
7	4	120	5500	34	10	250	10	150	4500	750	17	85	175	...	11100	325	1000	1000	100	...	7	
8	...	...	...	...	30	1000	70	500	15000	2500	40	200	275	...	...	630	1000	2000	200	4	8
9	2	34	1500	13	40	2000	80	250	7500	1250	60	300	250	...	...	1150	2000	500	500	20	9
10	...	...	...	...	30	750	60	150	4500	750	30	150	150	...	...	1025	2500	1000	500	7	10
11	7	413	25000	91	40	1100	80	500	15000	2500	75	375	900	1	700	1350	3000	1500	500	70	11	
12	...	...	...	...	42	1100	75	300	9000	1500	40	200	300	...	...	1200	2000	1500	1000	145	12
13	12	442	25000	114	150	2000	280	500	15000	2500	200	1000	1500	3	5200	3750	5000	500	2000	800	13	
Totals																						
	131	2320	96575	684	1598	68320	2121	15925	322800	89830	462	2310	7700	19	14000	21398	16500	8000	4800	1613		
															4640	106990	165	160	576	24195		
Values.....\$																						

SESSIONAL PAPER No. 22

RETURN showing the Kinds and Quantities of Fish Products in the County of Shelburne, Province of Nova Scotia, for the Year 1906.

Number.	DISTRICTS.	KINDS OF FISH.														TOTAL VALUE OF ALL FISH.	Number.				
		Lobsters, preserved in cans, lb.	Lobsters, fresh in shell cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Smelts, lb.	Alewives or Gaspereau, brls.	Eels, brls.	Clams, brls.			Flounders, lb.	Tom-cod or frost fish, lb.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.
1	Wood's Harbour	148800	2100	1060	...	800	300	...	250	225	...	...	...	...	...	...	...	...	220	8500	86,072 50
2	Shag Harbour and Bear Point	122160	1300	900	...	1100	400	...	1525	1800	220	...	25	...	...	...	...	380	1600	62,589 00	
3	Cape Island	174860	10000	27100	...	9500	3700	...	1800	38050	...	...	...	...	...	...	...	2400	11000	349,780 00	
4	Barrington	...	1200	9100	...	1400	275	...	4200	400	330	...	380	25	50	...	...	160	2600	77,645 00	
5	Port Latour and Baccaro	960	4100	18000	...	1800	2000	...	1375	1760	...	...	165	50	...	...	...	390	2300	160,434 00	
6	Cape Negro Island and Port Clyde	46944	600	19200	...	1200	820	...	900	...	450	...	...	...	...	...	...	750	2000	133,257 00	
7	Port Saxon, N. E. and N. W. Harbour	...	150	900	3	1200	300	100	45	300	1200	400	45	7	20	500	400	4	150	25	12,015 50
8	Black Point, Red Head and Round Bay	...	800	300	2	500	220	...	100	1000	300	200	30	6	15	1000	400	15	400	110	14,595 00
9	Roseway, McNutt's Island and Carleton	...	350	450	2	500	300	8	360	500	300	300	10	12	12	2000	500	12	300	100	14,697 00
10	Gunning Cove to Birchtown	...	216	75	...	1000	45	...	15	250	300	100	5	5	5	1000	1000	...	60	50	8,395 50
11	Shelburne and Sandy Point	13920	300	5100	5	5000	230	25	150	2450	5000	300	15	10	350	1500	1200	10	5000	125	45,338 50
12	Jordan	...	240	210	2	2000	110	...	85	725	1000	1500	15	4	5	1000	200	2	200	100	14,372 50
13	Lockeport	102672	3200	6710	10	5000	800	100	3190	18000	600	500	5	7	150	1000	1000	10	3000	500	139,293 00
	Totals	610316	24556	89105	24	31000	9500	233	13795	65460	9700	3300	635	126	607	8000	5700	53	13410	29010	...
	Values	\$ 152577	245560	445525	240	930	33250	699	41085	6546	970	165	2780	1260	1214	240	171	106	4023	43515	1,118,484 50

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., and the Quantity of Fish in the County of Yarmouth, Province of Nova Scotia, in the Year 1906.

DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						LOBSTER PLANT.		KINDS OF FISH.								
	Vessels.			Boats.			Gill Nets.			Trawls.		Hand Lines.		Canneries.		Salmon, fresh, lb.	Herring, fresh, lb.	Herring, smoked, lb.	Mackerel, fresh, lb.	Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Number.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.								Value.
<i>Yarmouth County.</i>																							
1	Yarmouth.....	20	433	14490	280	90	1350	180	525	10500	5250	250	3750	800	400	6600	3600	18100	800	20000	395040	22100	1
2	Port Maitland.....	10	164	5740	50	47	705	90	150	3000	1500	18	270	900	450	1000	4000	2900	400	50000	61880	2	
3	Sandford.....	5	89	2937	10	42	630	84	300	6000	3000	12	180	575	280	700	3800	7700	380	60000		3	
4	Arcadia.....	3	47	950	10	28	420	56	50	1000	500	150	75	150	75	1000	1500	16400	4350	47660	60300	4	
5	Pinkney Pt. and Comeau Hill.....	2	32	1080	7	60	900	120	215	4300	2150	200	100	100	700	11000	11000	4350	100			5	
6	Tusket.....	1	11	350	4	275	4120	275	2000	40000	20000	.....	.....	2750	1650		800	9020		104930	6760	6
7	Tusket Wedge.....	26	340	13600	78	154	2310	250	450	9000	4500	20	300	750	375	2100	2400	7000				7	
8	Pubnico.....	16	743	4681	190	150	2250	300	475	9500	4750	12	180	700	350	3000	2400	7000			137710	8	
9	Argyle.....	1	12	373	4	75	1125	150	325	6500	3250	8	120	75	40		1650					9	
10	Eel Brook.....	.....	.....	.....	.....	50	750	100	150	3000	1500	.....	.....	.....	.....							10
11	Salmon River.....	.....	.....	.....	.....	40	600	80	125	2500	1250	.....	.....	.....	.....		3000					11
Totals		84	1921	85330	633	1011	15160	1685	4765	95300	47650	320	4800	4150	2070	14100	28600	69870	32300	130000	807520	22100	
Values.....\$																	5720	699	65	15600	201880	221000	

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Yarmouth, Province of Nova Scotia, for the Year 1906.

Number.	DISTRICTS.	KINDS OF FISH.														TOTAL VALUE OF ALL FISH.	Number.								
		Cod dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, smoked, finnan haddies, lb.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.	Alewives or Gaspe- reau, brls.	Eels, brls.	Clams, brls.	Flounders, lb.			Tom-cod or frost fish, lb.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
Yarmouth County.																	\$	cts.							
1	Yarmouth.....	4140	30	520400	7500	55	2070	94500	700	.....	21000	.....	.....	.....	75	3000	.....	18	200	3000	400	200	379396 00	1	
2	Port Maitland.....	1680	25	320300	23700	.....	2850	11320	.....	.....	1400	.....	.....	.....	125	.....	.....	14	2500	2500	120	500	58226 00	2	
3	Sandford.....	530	20	164640	12000	.....	80	2780	.....	.....	1050	.....	.....	.....	125	.....	.....	.....	1200	600	90	300	20239 30	3	
4	Arcadia.....	425	.....	69120	.....	32	100	500	1200	.....	6900	.....	30	60	.....	.....	.....	.....	5	50	.....	.....	20847 60	4	
5	Pinkney Pt. and Comeau Hill..	167	.....	26090	.....	80	130	330	.....	.....	1500	.....	25	130	.....	.....	.....	15	55	195	40	.....	.....	15112 70	5
6	Tusket.....	50	.....	.....	.....	.....	.....	.....	18000	100	17500	2800	80	70	.....	.....	.....	.....	30	.....	500	.....	.....	19495 50	6
7	Tusket Wedge.....	643	18	99750	.....	140	550	2140	.....	.....	1250	.....	.....	.....	80	.....	.....	.....	.....	1500	150	.....	.....	37531 70	7
8	Pubnico.....	7880	45	489000	.....	.....	5000	.....	1000	.....	15400	24	.....	120	.....	.....	.....	.....	.....	3600	220	.....	.....	107713 50	8
9	Argyle.....	152	8	16800	.....	20	.....	160	14400	.....	1260	105	25	100	.....	.....	.....	.....	.....	150	.....	.....	.....	4094 50	9
10	Bel Brook.....	.....	.....	.....	.....	.....	.....	.....	17500	.....	17500	506	75	60	.....	.....	.....	.....	.....	160	.....	.....	.....	4947 50	10
11	Salmon River.....	.....	.....	.....	.....	.....	.....	.....	10800	.....	1400	560	60	50	.....	.....	.....	.....	.....	125	.....	.....	.....	4997 50	11
Totals.....		15667	146	1706100	43200	337	10780	111730	63600	100	70410	3989	295	995	3000	35800	177	4530	11445	1955	1000	.....	.....	.....
Values... \$		78335	1460	51183	2592	981	32340	11173	6360	1000	3520	15956	2959	1990	90	1074	708	9050	3434	2932	500	672601	80	.....

DISTRICTS.				FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.								LOBSTER PLANT.		KINDS OF FISH.								
Number.	Vessels.			Boats.			Gill-Nets.			Seines.			Trawls.		Wiers.		Hand-Lines.		Canner-ies.	Herring, salted, brls.	Herring, fresh, lb.	Herring, smoked, lb.	Mackerel, fresh, lb.	Mackerel, salted, brls.	Lobsters, preserved in cans, lb.	Number.		
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.									Value.	
<i>Digby County.</i>																												
1	Beaver River and Cape St. Mary	16	285	5250	82	33	1550	69	82	2460	490				28	150		290	145	1	400	350			30	41376	1	
2	Meteghan and River	4	105	3200	26	72	2160	100	42	1260	250							224	112	2	800	110				57600	2	
3	Saulnierville and Co-mauville					53	1550	99	9	270	54							120	60	1	400					44160	3	
4	Grosses Coques and Church Point	2	28	1400	11	56	2125	76	24	720	144				22	132	7	88	44							104	4	
5	Belliveau Cove to New Edinburgh	2	41	1100	12	57	2370	58	72	2160	432				95	570	1	100	102	51	2000				135		5	
6	Weymouth to Brighton					47	1475	66	48	960	515	4	120	120	55	750	8	90	90						43500		6	
7	Digby and Smith's Cove	12	622	45000	175	166	3700	70	71	1420	355	6	600	950	662	16240	13	3300	240	240			350	245000	51000	23000	7	
8	Bay View and Culloden					33	1090	52	50	1000	250	2	100	250	50	900		57	57				40	4500			8	
9	Gulliver's Cove, Ross-way and Waterford	1	11	500	3	45	1150	59	51	1020	240	4	110	115	52	675	2	55	55			25	440000	24150			9	
10	Centreville						36	3250	58	52	1040	315	1	50	30	58	1000		46	46	1	4500	450	132500	317200	8	11564	10
11	Sandy and Mink Coves					45	1205	43	70	1400	350	5	600	1025	50	1000	1	300	42	3	3400	75	297000	29400	26000		15220	11
12	Little River and Whale Cove	2	24	1800	9	53	1650	73	71	1420	355	3	200	845	102	2000		93	93	1	1000	925	68000	28800	9500			12
13	Tidville & East Ferry					28	800	39	31	620	150				46	820		40	40			55	89800	7000			5	
14	Tiverton and Central Grove	5	205	8000	39	167	6900	141	136	2720	665	3	250	450	190	3800		320	320	2	1800	400	162600	34300	6000		2544	14
15	Freeport	12	362	10000	125	115	3000	120	120	2400	680	3	250	200	225	4440		150	150			100	145600					15
16	Westport	9	155	5000	90	142	3875	475	125	2500	625	11	600	2500	180	3160		500	500			100	246700					16
Totals		65	1838	81250	572	1148	37850	1598	1054	23370	5870	42	2340	5985	1812	35037	27	5850	2457	2045	12	14300	3110	1965900	403700	139150	277	172463
Values		\$																										

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Return showing the Kinds and Quantities of Fish and Fish Products in the County of Digby, Province of Nova Scotia, for the Year 1906.

DISTRICTS.		KINDS OF FISH AND FISH PRODUCTS.																			TOTAL VALUE OF ALL FISH.	Number.	
Number.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, dried, cwt.	Haddock, smoked, finnan haddies, lb.	Hake, dried, cwt.	Hake, sounds, lb.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Smelts, lb.	Clams, brls.	Flounders, lb.	Tom-cod or frost fish, lb.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	\$ cts.	Number.	
Digby County.																							
1	Beaver River and Cape St. Mary.	490	1256			*	460		154	5500			40					120		180	26,522 00	1	
2	Meteghan and River	318	460				110		100	400			80					40		160	21,407 30	2	
3	Saulnierville and Co- meanville.	546	404						150				40							130	19,552 50	3	
4	Grosses Coques and Church Point.	324	495				40		530	320				380						240	11,182 00	4	
5	Belliveau Cove and New Edinburgh.	250	153						132				570							125	6,988 50	5	
6	Weymouth to Brighton	290	515	22	143000			20	18	560	150	130	31700	562	820	10000	8	290	80	570	1005	22,641 60	6
7	Digby and Smith's Cove	760	4520	22	57650	2230	1049500	12480	5056	2034	141050	2030	8100	8350	860	450	13	6330	4060	1200	5000	20,427 00	7
8	Bay View and Culloden	625	1175	23	190000			1950	1100	500	3220	40			650		37	470	650	644	670	28,854 50	8
9	Gulliver's Cove, Ross- way and Waterford.	740	1075	30	179700	500		2820	1450	383	4100	50	2000	78	1150		210	1270	800	530	1410	43,286 00	9
10	Centreville	420	3820	25	320800	116	175750	10150	5100	577	7120			6	350	250	300	540	3220	800	3000	97,139 00	10
11	Sandy and Mink Coves.	765	740	11	68000	210	70000	3110	1400	467	2150	35	900	25	880	200	10	125	1070	460	930	42,485 90	11
12	Little River and Whale Cove.	1435	1550	14	259000	1600	140000	6520	4200	127	4200			30	1030		50	2500	1800	900	6000	82,623 00	12
13	Tidville & East Ferry.	425	620	8	90600	150		1250	940	755	1100	30			520	200	70	1550	1370	1070	2500	25,716 00	13
14	Tiverton and Central Grove.	1300	7200	74	239000	540	50000	20525	6050	4540	11300	155			900	200	190	7700	1150	2320	6700	168,689 00	14
15	Freeport.	900	22420	100	200000	4000	4080	32000	4000	8653	32000	40		100	500		60	4820	7800	900	6000	203,244 00	15
16	Westport.	1250	6623	15	132000	1300	10000	3220	3000	17994	100000				600	2500	500	4450	7320	825	6000	149,640 50	16
Totals.		10838	53020	344	1879750	11381	1495350	66125	32308	37606	312610	2510	43500	10261	8260	13800	1448	30035	29480	10219	40050		
Values		\$ 108380	265100	3440	56392	39834	89721	198375	8077	112818	31261	251	2175	20522	248	414	5792	60070	8844	15328	20025		1,155,458 80

* In Nos. 1 to 5 add 14,200 cases finnan haddies, \$1,420.

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Annapolis, Province of Nova Scotia, for the Year 1906.

Number.	DISTRICTS.	KINDS OF FISH.															TOTAL VALUE OF ALL FISH.	Number.
		Salmon, fresh, lb.	Herring, salted, brls.	Herring fresh, lb.	Herring, smoked, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, fresh, lb.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lb.	Pollock, cwt.	Trout, lb.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
<i>Annapolis County.</i>																		
1	Margaretsville.....	4000	300	1000	.....	10	400	1000	100	100	50	95	.....	100	20	75	4,685 00
2	Port George.....	.....	300	900	.....	150	300	1000	500	100	50	50	.....	60	40	100	7,679 50
3	Port Lorne.....	.....	500	1000	.....	200	400	1500	300	200	100	100	.....	125	50	75	8,680 00
4	Hampton.....	.....	475	800	.....	200	500	1000	325	300	150	150	.....	150	50	40	9,578 00
5	Pinney Cove.....	.....	400	1000	.....	175	300	900	600	800	200	200	.....	200	60	50	10,612 00
6	Parkers' Cove.....	.....	450	1000	.....	200	400	1000	900	1000	400	300	.....	300	60	75	13,657 50
7	Hillsburn.....	.....	200	600	.....	175	300	800	1000	1200	450	200	.....	200	40	50	12,237 50
8	Litchfield.....	.....	250	700	.....	200	225	900	900	1500	400	175	.....	175	35	60	12,469 00
9	Thorn's Cove.....	.....	50	.....	.....	100	300	1500	1100	1600	450	200	.....	300	40	65	12,090 00
10	Victoria Beach.....	.....	20	3000	.....	150	600	6000	1000	4000	600	900	.....	400	60	.....	23,490 00
11	Clementsport.....	.....	.....	.....	.....	.....	75	.....	100	100	.....	25	1200	.....	.....	.....	1,260 00
12	Lequille and Round Hill Rivers, and inland lakes.	1100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	340 00
	Totals.....	5100	2945	7000	3000	1560	3800	15600	6725	10900	2850	2395	1200	2010	455	590	.....
	Values.....	1020	14725	70	60	15600	19000	468	23537	32700	713	7185	120	603	682	295	116,778 50	

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., and the Quantity and Value of all Fish in the County of King's, Province of Nova Scotia, for the Year 1906.

DISTRICTS.				FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.						KINDS OF FISH.								
				Vessels.		Boats.		Gill-nets.		Seines.		Trawls.		Weirs.		Hand Lines.						
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Salmon, fresh, lb.	Herring salted, brls.	Herring, fresh, lb.	Herring, smoked, lb.		
<i>King's County.</i>																						
1			20	13	400	75	2	330	200				3	750	112	112	12500	75	20000	2000	1	
2			120	8	120	150	1	250	100				1	250	12	12	4000	275	2400		2	
3			225	6	11	500	300	3	450	300				3	750	20	10000	100	50000	20000	3	
4			200	10	10	300	100	3	450	375				3	730	20	12000	200	30000	11000	4	
5			235	14	14	410	150	2	350	225	10	150		500	30	30	18000	450	60000	10000	5	
6			450	40	31	700	300	2	300	200	30	400		500	30	30	10000	500	3000	20000	6	
7			50	6				2	300	200				500	100	100	11800	215	90600		7	
8			350	30	40	1000	300	2	250	300	20	300		500	120	120	12000	300	6000		8	
9			60	10	10	100	125	2	350	300	4	75		500	16	16	13000	15	31000	2000	9	
10			360	24	30	450	230	1	2520	1200	8	125		500	100	100	4000	250	15000	120000	10	
11			120	12	3	60	75	1	200	75				250	10	10	500	25	12000	41000	11	
12			200	14	4	80	80	1	1800	750				250	30	30	200	28	9000		12	
13			150	10	10	1200	550	2	1400	550							3000	20			13	
Totals				144	2770	204	186	5645	2435	24	8920	4775	72	1050	24	5980	588	113500	2453	350600	226000	
Values																	22700	12265	3506	4520		

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of King's, Province of Nova Scotia, for the Year 1906.

DISTRICTS.	KINDS OF FISH.																			TOTAL VALUE OF ALL FISH.	Number.
	Mackerel, fresh, lb.	Mackerel, salted, brls.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, fresh, lb.	Haddock, dried, cwt.	Haddock, smoked fin- nan haddies, lb.	Hake dried, cwt.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Shad, brls.	Alewives or Gaspereau, brls.	Bass, lb.	Clams, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
<i>King's County.</i>																					
1 Morden and vicinity	6060	10	60	100	2600	4	.....	2	100	700	.....	.....	50	300	.....	1000	.....	350	1000	8,788	00
Victoria and Ogilvie	5000	.....	120	45	300	5	.....	5	30	200	.....	.....	.....	.....	.....	700	.....	350	.....	6,504	00
Harbourville	800	.....	60	30	4000	10	.....	7	10	500	.....	.....	15	200	.....	2000	10	300	500	9,261	50
Canada Creek	3000	.....	180	300	7000	16	.....	.....	100	800	.....	2	20	500	.....	1000	20	450	8000	15,057	00
Chipman Brook and Hunting Pt.	5000	.....	123	110	14700	100	.....	12	500	.....	5	5	20	450	.....	2700	40	415	9900	22,210	50
Hall's Harbour	500	4	120	250	50400	100	400	48	650	1300	.....	4	25	650	.....	9000	310	550	5000	33,512	00
Peace Point and Sheffield Vault.	400	.....	70	20	800	.....	.....	.....	110	.....	.....	.....	25	350	.....	.....	.....	310	1600	7,083	00
Baxter Harbour	1200	7	5	350	40000	50	.....	30	70	200	.....	.....	6	200	.....	.....	.....	400	1000	8,848	00
Whalen Beach and Wells Cove.	11000	2	16	80	10700	.....	.....	8	103	840	.....	3	25	.....	.....	.....	.....	95	800	6,355	50
Scott's Bay	80000	25	100	320	32000	.....	.....	15	50	1000	.....	40	50	400	10	.....	.....	800	8000	24,230	00
Blomidon and vicinity	40000	.....	.....	15	2000	.....	.....	.....	30	900	.....	4	50	300	1200	.....	.....	50	1000	9,525	00
Star's Point to Wolfville .....	.....	.....	.....	27	3000	.....	.....	.....	7	1300	.....	124	10	.....	20	700	.....	16	20	3,271	36
Avonport to County line includ- ing Inland waters .....	.....	.....	.....	60	.....	.....	.....	.....	13	.....	8506	12	100	100	.....	.....	.....	.....	.....	2,419	00
Totals	152900	48	854	1707	167500	185	400	127	1773	6453	8500	194	396	3450	1230	17100	70	4086	36820	.....	.....
Values	18348	720	8540	8535	5025	647	24	381	5319	645	850	1940	1584	345	2460	34200	21	6129	18410	157,114	80

RECAPITULATION

Of the Yield and Value of the Fisheries in District No. 3, Nova Scotia,
for the Year 1906.

Kinds of Fish.		Quantity.	Rate.	Value.	Amount.
			\$ cts.	\$ cts.	\$ cts.
Salmon, fresh.....	Lb.	229,625	0 20	45,925 00	
" smoked.....	"	2,695	0 20	539 00	
					46,464 00
Herring, salted.....	Brls.	51,946	5 00	259,730 00	
" fresh.....	Lb.	2,441,670	0 01	24,416 70	
" smoked.....	"	703,930	0 02	14,078 60	
					298,225 30
Mackerel, fresh.....	"	904,495	0 12	108,539 40	
" salted.....	Brls.	9,153	15 00	137,295 00	
					245,834 40
Lobsters, preserved in cans.....	Lb.	1,805,680	0 25	451,670 00	
" fresh in shell.....	Cwt.	65,059	10 00	650,590 00	
					1,102,260 00
Cod, dried.....	"	284,599	5 00	1,422,995 00	
" tongues and sounds.....	Brls.	644	10 00	6,440 00	
					1,429,435 00
Haddock, fresh.....	Lb.	3,823,155	0 03	114,694 65	
" dried.....	Cwt.	39,041	3 50	136,643 50	
" finnan haddies.....	Lb.	1,539,850	0 06	92,391 00	
					343,729 15
Hake, dried.....	Cwt.	79,772	3 00	239,316 00	
" sounds.....	Lb.	35,378	0 25	8,844 50	
					248,160 50
Pollock.....	Cwt.	68,732	3 00		206,196 00
Halibut.....	Lb.	661,123	0 10		66,112 30
Trout.....	"	92,785	0 10		9,278 50
Shad.....	Brls.	299	10 00		2,990 00
Smelts.....	Lb.	134,510	0 05		6,725 50
Bass.....	"	3,450	0 10		345 00
Alewives.....	Brls.	5,263	4 00		21,052 00
Eels.....	"	548	10 00		5,480 00
Clams.....	"	13,210	2 00		26,420 00
Flounders.....	Lb.	245,260	0 03		7,357 80
Tom-cod or frost fish.....	"	73,900	0 03		2,217 00
Squid.....	Brls.	1,680	4 00		6,720 00
Mixed fish.....	"	53,736	2 00		107,472 00
Fish oil.....	Galls.	107,895	0 30		32,368 50
" as bait.....	Brls.	48,905	1 50		73,357 50
" as fertilizer.....	"	78,630	0 50		39,315 00
Seal skins.....	No.	50	1 25		62 50
Total for 1906.....					4,327,577 95
" 1905.....					4,499,053 58
Decrease.....					171,425 53

SESSIONAL PAPER No. 22

RECAPITULATION

Of the Value of Fishing Vessels, Boats, Nets, &c., in District No. 3, Nova Scotia, for the Year 1906.

Articles.	Value.	Totals.
	\$	\$
444 fishing vessels (17,939 tons).....	971,570	
6,270 " boats.....	181,310	
925 " dories.....	12,350	
27,803 gill-nets (600,265 fathoms).....	210,960	
251 seines (27,680 fathoms).....	38,660	
154 trap-nets.....	49,780	
67 weirs.....	14,380	
3,726 trawls.....	71,824	
37 smelt-nets.....	824	
22,405 hand lines.....	16,215	
58 lobster canneries.....	51,400	1,567,813
174,692 " traps.....	159,767	
163 freezers and ice houses.....	36,680	211,167
1,816 smoke and fish houses.....	103,405	
776 fishing piers and wharfs.....	269,905	
134 " tugs and smacks.....	88,435	
		498,425
Total.....		2,277,405

STATEMENT of Persons employed in the Fisheries of the above District (No. 3), 1906.

	No.
Men in vessels.....	4,109
" boats.....	8,364
Persons employed in lobster canneries.....	1,069
Total.....	13,542

RECAPITULATION BY COUNTIES

Showing the Number of Vessels and Boats and the Quantity and Value of all Fishing Materials used in the Fishing Industry in the Province of Nova Scotia, for the Year 1906.

Number.	COUNTIES.										FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.									
	District No. 1.										District No. 2.										District No. 3.									
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.
1 Richmond	61	1311	33050	370	1088	21750	1819	9831	194870	69720	6	95	90	1	1000	606	3905	1	606	3905	1	606	3905	1	606	3905	1	606	3905	1
2 Cape Breton	21	379	10175	100	529	14763	898	2485	58735	21065	1	150	600	13	8600	389	3020	2	1567	6655	2	1567	6655	2	1567	6655	2	1567	6655	2
3 Victoria	8	131	2525	28	600	10425	949	1390	36111	12695	1	150	600	13	8600	389	3020	2	1567	6655	2	1567	6655	2	1567	6655	2	1567	6655	2
4 Inverness	23	280	2880	96	605	13630	940	1164	44315	17067	1	120	400	1	600	336	3365	4	336	3365	4	336	3365	4	336	3365	4	336	3365	4
5 Antigonish	1	17	200	4	228	4689	291	749	14526	3342	...	...	...	40	6900	195	848	5	195	848	5	195	848	5	195	848	5	195	848	5
6 Colchester	...	...	...	...	135	3175	343	296	15600	3105	...	...	...	...	...	...	250	6	7	250	6	7	250	6	7	250	6	7	250	6
7 Cumberland	3	51	1000	7	217	5677	340	537	16350	3307	...	...	...	...	...	...	825	7	28	825	7	28	825	7	28	825	7	28	825	7
8 Guysborough	64	1054	58550	319	1948	77345	1952	17460	355390	170265	28	2984	6465	46	27000	2966	29445	8	2966	29445	8	2966	29445	8	2966	29445	8	2966	29445	8
9 Halifax	72	1784	55815	413	2548	51639	2373	13899	353281	64721	388	42390	83935	32	3920	1186	5186	9	1186	5186	9	1186	5186	9	1186	5186	9	1186	5186	9
10 Hants	...	...	...	...	121	1950	136	187	6000	2430	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11 Pictou	2	16	900	8	287	8415	347	306	12014	4717	...	...	...	...	...	...	155	11	30	155	11	30	155	11	30	155	11	30	155	11
12 Lunenburg	142	11405	694090	2119	1788	45450	1883	4276	110200	50445	171	15000	25000	137	27330	645	25786	12	645	25786	12	645	25786	12	645	25786	12	645	25786	12
13 Queen's	7	183	8500	35	385	7400	551	1173	22000	5000	11	520	2350	10	3750	5	50	13	5	50	13	5	50	13	5	50	13	5	50	13
14 Shelburne	131	2320	96375	684	1598	68320	2121	15925	322800	89830	3	300	550	2	2000	462	2310	14	462	2310	14	462	2310	14	462	2310	14	462	2310	14
15 Yarmouth	84	1321	85330	633	1011	15100	1685	4765	95300	47650	...	...	...	...	...	...	4800	15	320	4800	15	320	4800	15	320	4800	15	320	4800	15
16 Digby	65	1388	81250	572	1148	37850	1598	1054	23370	5870	42	2940	5985	1	700	1812	35637	16	1812	35637	16	1812	35637	16	1812	35637	16	1812	35637	16
17 Annapolis	8	165	4200	45	136	4360	322	424	20950	9730	24	8920	4775	...	...	72	1050	17	72	1050	17	72	1050	17	72	1050	17	72	1050	17
18 King's	7	107	1625	21	144	2770	204	186	5645	2435	...	...	...	...	...	...	1050	18	72	1050	17	72	1050	17	72	1050	17	72	1050	17
Totals	700	23042	1137465	5454	14636	394768	18752	76107	1707757	583394	576	73464	130175	288	98200	11290	125478		11290	125478		11290	125478		11290	125478		11290	125478	

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RECAPITULATION BY COUNTIES

Showing the Number of Vessels and Boats and the Quantity and Value of all Fishing Materials used in the Fishing Industry in the Province of Nova Scotia, for the Year 1906.

COUNTIES.		FISHING GEAR OR MATERIALS.				LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.											
		Weirs.		Smelt-nets.		Hand Lines.		Canneries.		Traps.		Persons employed in canneries.		Freezers and Ice-houses.		Smoke and fish houses.		Piers and wharfs.		Tugs Steamers and snacks.	
		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Persons employed in canneries.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
District No. 1.																					
1	Richmond.....			83	670	5042	4440	11	12400	46050	36725	270		3	3050	838	18275	187	10870	26	3355
2	Cape Breton.....			3	9	2394	1290	15	21600	33360	23475	357		5	3190	217	7479	126	17770	31	9060
3	Victoria.....					2101	2200	14	5300	16553	13785	180		11	5125	178	10405	43	12461	9	1160
4	Inverness.....	20	30	50	200	1733	1555	20	14520	55400	29980	337		15	5180	156	6485	58	68010	13	4250
District No. 2.																					
5	Antigonish.....			2	90	295	145	6	6300	18400	10350	149		3	4700	114	1149	2	2000	1	300
6	Colchester.....	3	150	13	195	12	10	2	2000	4000	2000	26				22	1690				6
7	Cumberland.....	3	170	201	2668	378	378	32	22350	47120	33820	313		1	50	17	2329				7
8	Guysborough.....	10	325	26	497	5128	4485	38	29850	70700	62490	383		31	122175	705	107510	215	137910	12	50260
9	Halifax.....	11	55	14	388	4117	2042	19	30550	74050	37380	240		10	10260	876	61126	607	16696	13	7890
10	Hants.....					130	90														10
11	Pictou.....	1	75	66	2920	58	58	23	30550	59800	36420	333		20	1595	2	40	4	105	2	3700
District No. 3.																					
12	Lunenburg.....					5585	2947	6	2300	15030	6780	109		5	1600	520	31425	360	89360	12	1140
13	Queen's.....					1360	800	9	6700	15800	11800	160		30	1400	250	7550	63	3890	12	8400
14	Shelburne.....			8	40	7700	7200	19	14000	52600	52400	311		12	6650	359	20840	201	26200	44	13700
15	Yarmouth.....					4150	2070	12	14100	44930	44930	285		32	15690	111	3720	45	63600	49	46770
16	Digby.....	5	750	9	180	2457	2045	12	14300	35210	35210	204		44	9705	334	24260	107	86855	17	12425
17	Antigonish.....	27	5850	20	604	565	565			9400	6925			13	850	144	6460				15
18	King's.....	11	1800			588	588			1722	1722			27	785	92	3150				17
	Totals.....	115	15355	495	8461	43793	32908	238	226820	600125	446192	3658		262	192305	4941	319893	2018	535727	241	168410

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RECAPITULATION BY COUNTIES.

Showing the Kinds and Quantities of Fish and Fish Products in the Province of Nova Scotia, for the Year 1906.

Number.	COUNTIES.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.	Alewives or Gaspereau, brls.	Bas, lb.	Eels, brls.	Oysters, brls.	Clams, brls.	Flounders, lb.	Tom cod or frost fish, lb.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, number.	TOTAL VALUE OF ALL FISH.	Number.
District No. 1.																					
1	Richmond	3319	25950	5080	24700	731	491	68	247	242000	47200	1152	2635	12255	1681	532,305	00	1			
2	Cape Breton	1634	4303	6780	37	15000	266	247	68	247	8700	5500	7	116	8394	2312	287,038	33	2		
3	Victoria	2615	4570	3075	6600	2	103	219	1	1	2450	272	292	3715	3214	140,167	75	3			
4	Inverness	337	13580	5800	12815	30	404	750	122	1	3400	2420	1558	3080	4748	312,983	05	4			
District No. 2.																					
5	Antigonish	16	670	12600	5800	12	1000	59	79	3	19400	324	598	1315	1218	71,595	24	5			
6	Colchester	5	3500	81	7990	105	3150	200	750	1	1650	49	187	36	300	28,584	10	6			
7	Cumberland	73	2800	3450	259	63500	50	15	328	82	15100	11077	2026	62790	6980	120,944	10	7			
8	Guysborough	35014	92625	18970	11	37445	860	4800	1105	6194	162100	213	302	10135	2459	1,161,141	75	8			
9	Halifax	2706	77670	13615	50800	200	287	3	3	15	1000	18	18	752	4486	668,166	50	9			
10	Hants	12	2150	32	56350	45	200	111	75	15	2800	18	18	752	4486	7,353	50	10			
11	Pictou	1514	159700	675	9800	70	59	59	77	225000	18600	1963	50110	2465	170	907,570	15	11			
12	Lunenburg	869	5170	6600	5	113	68	68	40	1000	5700	55	55	1370	715	200,169	40	12			
13	Queen's	13795	65460	9700	3300	695	126	126	607	8000	3800	177	4530	11445	1955	1,118,484	50	13			
14	Shelburne	10780	111730	63600	100	70410	3989	295	995	3700	35800	1448	30035	29480	10219	672,001	80	14			
15	Yarmouth	37606	312610	2510	43500	200	287	3	10261	8260	13800	177	30035	29480	10219	1,155,458	80	15			
16	Digby	2395	1200	850	194	396	3450	3450	1233	1233	1233	17100	70	4086	36820	1,155,458	80	16			
17	Annapolis	1773	6453	850	194	396	3450	3450	1233	1233	1233	17100	70	4086	36820	1,155,458	80	17			
18	King's	114403	924848	167675	710	415510	8124	12650	3320	1722	20624	634210	157950	17218	61329	209921	73132	106739	156	7,799,159	92
Totals																					

RECAPITULATION.

OF the Yield and Value of the Fisheries of the **whole of Nova Scotia** for the
Year 1906.

Kinds of Fish.	Quantity.	Rate.		Value.		Amount.	
		\$	cts.	\$	cts.	\$	cts.
Salmon, fresh..... Lb.	714,210	..	.....	134,381	50		
" preserved in cans..... "	6,804	0	15	1,020	60		
" smoked..... "	24,970	0	20	4,994	00	140,396	10
Herring, salted..... Brls.	114,417	.....		540,849	50		
" fresh..... Lb.	5,437,232	0	01	54,372	32		
" smoked..... "	779,930	0	02	15,598	60	610,820	42
Mackerel, salted..... Brls.	40,829	15	00	612,435	00		
" fresh..... Lb.	4,468,525	0	12	536,223	00	1,148,658	00
Lobsters, preserved in cans..... Lb.	4,595,816	0	25	1,148,954	00		
" fresh in shell..... Cwt.	87,956	.....		784,853	00	1,933,807	00
Cod, dried..... Cwt.	386,840	5	00	1,934,200	00		
" fresh..... Lb.	266,400	0	03	7,992	00		
" tongues and sounds..... Brls.	930	10	00	9,300	00	1,951,492	00
Haddock, dried..... Cwt.	64,691	3	50	226,418	50		
" fresh..... Lb.	10,274,125	0	03	308,223	75		
" smoked (finnan haddies)..... "	2,570,550	0	06	154,233	00	688,875	25
Hake, dried..... Cwt.	91,938	.....		269,731	00		
" sounds..... Lb.	45,995	0	25	11,498	75	281,229	75
Pollock..... Cwt.	114,520	3	00	.....		313,559	00
Halibut..... Lb.	924,848	0	10	.....		92,484	80
Trout..... "	167,675	0	10	.....		16,767	50
Bass..... "	12,650	0	10	.....		1,265	00
Shad..... Brls.	710	10	00	.....		7,100	00
Alewives..... "	8,124	4	00	.....		32,496	00
Eels..... "	3,320	10	00	.....		33,200	00
Smelts..... Lb.	415,510	0	05	.....		20,775	50
Oysters..... Brls.	1,722	6	00	.....		10,332	00
Clams..... "	20,624	.....		.....		41,988	00
Flounders..... Lb.	694,210	0	03	.....		20,826	30
Tom cod or frost fish..... "	157,950	0	03	.....		4,738	50
Squid..... Brls.	17,218	4	00	.....		68,872	00
Coarse and mixed fish..... "	61,329	2	00	.....		122,658	00
Dogfish..... "	.....	.....		.....		580	00
Fish oil..... Galls	209,921	0	30	.....		62,976	30
" as bait..... Brls.	73,132	1	50	.....		109,693	00
" as fertilizer..... "	106,739	0	50	.....		33,369	50
Seal skins..... No.	156	1	25		195	00
Total for 1906.....		7,799,159	92
Total for 1905.....		8,259,085	28
Decreased.....		459,925	36

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RECAPITULATION.

Of the Capital invested in Fishing Vessels, Boats, Nets and other implements in all
Nova Scotia, for the Year 1906.

Number and Description of Articles.	Value.	Total.
	\$ cts.	\$ cts.
700 fishing vessels (23,042 tons).....	1,137,465 00	
14,636 " boats.....	394,768 00	
926 " dories.....	12,350 00	1,544,583 00
76,107 gill-nets (1,707,757 fathoms).....	583,394 00	
676 seines (73,464 fathoms).....	130,175 00	
104 " spillers.....	11,400 00	
238 trap-nets.....	98,200 00	
11,290 trawls.....	125,478 00	
115 weirs.....	15,355 00	
495 smelt bag-nets.....	8,461 00	
43,793 hand-lines.....	32,908 00	1,005,371 00
238 lobster canneries.....	226,820 00	
600,125 " traps.....	446,192 00	673,012 00
262 fish freezers or ice-houses.....	192,305 00	
4,941 smoke and fish houses.....	319,893 00	
2,018 fishing piers and wharfs.....	535,727 00	
241 fishing tugs and smacks.....	168,410 00	1,306,335 00
Total.....		4,529,301 00

Statement of persons engaged in the Fisheries of all Nova Scotia, 1906.

Men in fishing vessels ..	No. 5,454
" boats ..	18,752
Persons in lobster factories.....	3,658
Total.....	27,864

APPENDIX No. 3.

NEW BRUNSWICK.

District No. 1, comprising the counties of Charlotte and St. John. *Inspector John Calder, Campobello.*

District No. 2, comprising the counties of Albert, Westmorland, Kent, Northumberland, Gloucester and Restigouche. *Inspector R. A. Chapman, Moncton.*

District No. 3, comprising the counties of King's, Queen's, Sunbury, York, Carleton and Victoria. *Inspector H. E. Harrison, Fredericton.*

DISTRICT No. 1.

REPORT ON THE FISHERIES OF DISTRICT No. 1, NEW BRUNSWICK, FOR THE YEAR 1906.

CAMPOBELLO, May 6, 1907.

To the Dominion Commissioner of Fisheries.
Ottawa.

SIR,—I have the honour to submit herewith my first annual report on the fisheries of District No. 1, New Brunswick for the year ending December 31, 1906, with the statistics of the different subdivisions and synopses of the reports of their officers.

I have to report a decrease in the value of the yield for the year, as compared with the statistics for 1905, of \$217,711: due entirely to two causes: first, the great falling off in the catch of sardine herring; second, the vast difference in the prices paid for these fish during the present year, and the statistical price for 1905. I have put the value of these fish at \$1.50 per barrel, which amount I think is a fair average value. The reports for 1905 place them at \$2 per barrel, a greater average price than they brought. Therefore, while the aggregate of the catch of sardine herring for 1906, is of less value than that of 1905, the actual difference, is not nearly so great, as one would be led to believe from merely reading the figures for the two years.

Nearly all other branches of the fisheries were good, high prices were paid, and all the fishermen, with the exception of those engaged in the sardine business, report a very prosperous season.

HERRING.

An increase of 414 brls., is reported in the catch of large herring salted in barrels. The price of these fish was quite low, and a poor demand existed, or otherwise the volume of business done in the branch, would have been much greater.

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It is gratifying to report a large increase in the amount of herring smoked during the year, over that of 1905. That year the total output was 4,565,200 lbs., with a total value of \$91,304. This year the output is 6,343,666 lbs., an increase of 1,780,465 lbs., and \$35,609 in value. You will notice a decrease in the catch of sardine herring, as compared with the returns for 1905 of 108,971 barrels. This is not so serious an affair as it looks from the face of it. During 1905, herring suitable for sardines were very plentiful, the oldest fishermen say they were never, in their time, any more so. The American canners, with the advantages of machines for making and sealing their cans, which were successfully used for the first time that season, packed the enormous total of 100,500,000 cans, fully 33 per cent in excess of the pack of any previous year, and also a far greater amount than they could find a market for. Consequently when the season of 1906 began, the canners had nearly all their store houses full of these goods, kept over from 1905. Following the example set by the great trusts of that country, the American canners held regular meetings, and entered into a hard and fast agreement to curtail their pack for the season, allowing each factory to take so many hogsheds of herring per week. In consequence of this there were times when plenty of herring were in the weirs, and no one to buy them. The canners took advantage of the situation and paid the fishermen poor prices. This has had the effect of opening the eyes of our fishermen, to the necessity of united action on their part.

Acting under the authority of a Bill, enacted at the Session of the Provincial Legislature, they have joined themselves into a body, to be known as 'The Weir Fishermen's Union.' They have set a standard price of \$8 per hogshedd upon their fish for the coming season. It is to be sincerely hoped that their efforts in this direction will be crowned with success.

SALMON.

It is pleasing to report a large increase in this important branch of the fisheries. The officers report that salmon are getting more plentiful each year. They attribute this to the work of the fish culture department.

POLLOCK.

You will also notice a large increase in the yield of this fishery, due in a great measure to the unsatisfactory conditions prevailing in the sardine industry, compelling the men who generally engage in that, to turn their attention to pollock fishing. The yield for the year is 29,132 cwts., an increase over 1905, of 6,551 cwts. These fish commanded a good price all the season. Dynamiting is still carried on among these fish by residents of Eastport and Lubec, Me., principally on the American side of the boundary line. On account of the patrol by the local officers, very little of the business was done in our waters, occasionally they steal over and destroy a 'school.' But as the same 'schools' of pollock leave the shores of Campobello, at the beginning of the flood tide, and keeping on top of the water, in plain view of all, and are carried by the current over across to the American side, there to be met with by unscrupulous persons, well supplied with dynamite, and in no danger of being prosecuted for their lawless acts, it in a great measure nullifies our efforts on this side of the boundary.

SHAD.

There is a decrease in the yield of this fishery of 65 brls. The officers report that they are getting scarcer each year.

COD, HAKE AND HADDOCK.

There is a slight increase in dry cod over 1905, and a large increase in the amount of these fish sold fresh. An increase of 3,893 cwts., will be seen in amount of hake and haddock, dried over that of the previous year, and a very large decrease in the amount of fresh haddock.

7-8 EDWARD VII., A. 1908

LOBSTERS.

There is a decrease of 3,398 cwts., in lobsters sold fresh in the shell, and 10,004 cans in the amount preserved. I would urge upon your department the great need of a lobster hatchery in this district.

DOGFISH.

These pests were not so numerous-as in former years.

COCKLES.

Nine hundred and thirty-nine brls, of these were gathered during the summer, mostly by several fishermen from Nova Scotia, who reap a good harvest out of them. No doubt the business will assume much greater proportions in the near future.

CLAMS.

The clam-canning industry appears to be steadily increasing. The pack for 1906 being 199,250 more cans than were put up the previous season.

SYNOPSIS OF FISHERY OFFICERS' REPORTS.

Overseer Frazer, of Grand Manan, states that there was a large increase in the amount of herring smoked over the previous season. And a decrease in all other branches of \$11,000, due to a less vigorous prosecution of the industry, on account of many of the young men being employed in the sardine canneries in Eastport and Lubec, Maine. And also on account of less herring sold for sardines than in 1905. About 90 per cent of the products of fisheries from this division, both cured and fresh, go to foreign markets, principally the United States. The close seasons were observed and no illegal fishing came to his knowledge.

Overseer Savage, of Campobello, reports, that pollock fishing began about May 15, and continued good until November 1. Some of the weirs also made large catches. The total yield was 3,000 quintals more than in any previous year. Prices were good and the fishermen had a prosperous season, although squid for bait were scarce. Sardine herring were scarce.

Overseer Belyea, St. John, reports the best season the salmon fishing has enjoyed for ten years, this he states is in a great measure due to the excellent results from the fish culture department.

Guardian McNeil, West Isles, reports a poor season in the sardine fisheries, and a fairly good season in the other branches. Lobsters scarce and prices high, he reports in favour of a 10½ inch size limit.

I am not in a position to report as to whether the different regulations affecting the fisheries were generally observed or not, on account of not being appointed Inspector until late in the season.

I am sir,

Your obedient servant,

JOHN F. CALDER,

Inspector of Fisheries

DISTRICT No. 2

MONCTON, N. B., February 12, 1907.

The Dominion Commissioner of Fisheries, &c.,
Ottawa.

SIR,—I have the honour to submit my report of the fisheries in District No. 2 of the province of New Brunswick, consisting of the counties of Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert, together with the parish of Stanley in the county of York, and the parish of Aberdeen in the county of Carleton, for the year 1906, giving the products and values by districts and counties, also an estimate of the capital employed in the prosecution of the fisheries.

These returns show an increase in the aggregate values over those of last year of very nearly \$300,000; about \$200,000 of this arises from a larger catch, and \$100,000 from higher prices.

I will now refer briefly to the several principal kinds of fish caught.

SALMON

Show a much larger catch than for the previous year, and above that of 1904 of about 500,000 lbs., or fully fifty per cent.

They were also reported by the guardians as very plentiful in all the streams and on the spawning grounds last fall, which indicates a continuation of good fishing.

SHAD

Were a little more plentiful in the Bay of Fundy last year than usual. What is required to thoroughly restore this fishing is a close season during spawning time.

HERRING.

The usual large quantities of spring herring were taken for food, smoking, bait, &c., &c. The fall fishing on the Miscou Caraquet banks was also fairly good. The Scotch curers spent some time at Caraquet catching and curing these fish, which I believe will lead to better methods hereafter, and much higher prices will be sure to follow such improvements.

MACKEREL.

More were caught than in 1905, and the increase appeared to be general everywhere on our coasts.

COD.

Notwithstanding considerable scarcity of bait, the quantity taken was considerably in excess of that of the previous year, and prices being very high made it a profitable season for those engaged in this important fishery; means should be taken to make bait available at all times when required.

SMELTS.

The winter of 1906 being very unfavourable for the keeping and shipping of these fish, owing to so much mild weather, the totals are not quite up to the average of the previous few years, but this season the weather is more favourable and prices are high.

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LOBSTERS.

There was quite a marked increase in the pack of lobsters last year, owing to a big run in the Straits of Northumberland, especially the latter part of the open season, in many cases in Westmorland county the canners could hardly take care of the fish, and fishermen made from fifty to seventy dollars per day with one boat. This will greatly stimulate the business and may lead to overfishing in 1907. North of Chockpish the catch was not quite up to that of 1905.

OYSTERS.

Rather more were taken than in the previous year, especially at Buctouche where they are of the very best quality, and prices were higher than ever before. Winter fishing in deep water does not appear to have done any harm, but to give them time to grow in such deep water, we have now, as arranged, laid off those areas into sections which are fished in rotation every third year.

CLAMS.

Large quantities of hard shell clams (quahaugs), were again raked in Buctouche, Cocagne, Shediac, &c., &c., but some restrictions should be put on this fishery as to rakes, &c., to prevent the small ones from being taken.

Fishermen should also be under license to give the local officers better control.

A great many soft shell clams were canned by Messrs. A. & R. Loggie, at Inker-man, Gloucester county.

Of the other kinds of fish fully as many were taken as usual in the aggregate and values were higher than ever before.

I have the honour to be, sir,

Your obedient servant,

R. A. CHAPMAN,
Inspector of Fisheries.

DISTRICT No. 3

FREDERICTON, N.B., February 20, 1907.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report on the state of the fisheries in District No. 3 (inland) in the province of New Brunswick for twelve months, to January 1st, 1907, with statistics showing the quantity and value of fish taken, also materials and value of same used in connection with the fisheries in this district.

A comparative statement of the value of fish taken and materials used in 1905 and 1906, is herewith given, viz.:

	Value of fish.	Value of materials.
1905	\$65,387	\$55,384
1906	42,646	47,004

showing a very great decrease in the catch of fish, for which I am unable to give any explanation.

The decrease in materials used can be accounted for by the fact that a good run of fish will bring into use more materials. No doubt it will be said that the fisheries are being prosecuted too extensively, but I hesitate before accepting that view, particularly when it is remembered that the season of 1905 was considered one of the best known in the history of the inland fisheries of the province.

It is possible that the small run in the fishing season, regarding salmon, particularly, may result in great good to this particular branch, as I have been told by different fishermen, that salmon seemed particularly plentiful in the St. John river just after the fishing season closed. These fish would probably reach their spawning grounds in good time to deposit their eggs and return to the salt water.

The fly-surface-fishing was the least satisfactory on the Tobique river in 1906 for several years. A fact of local interest at least, was the absence of any fly-surface-fishing (salmon) on the St. John river the past season, whereas in 1905 the first reported instance of successful fly fishing for salmon, about fifty young salmon were taken from one pool near this city. The condition of the water may be accountable for this. In 1905, for a long spell, the water was remarkably low and salmon collected in the pools, seemingly waiting for a rise of water before ascending to the head waters.

SHAD.

I regret to have to report a very much smaller catch of this very popular and valuable fish and trust it is only temporary. The demand could not be nearly supplied and prices were very high. Possibly there is more truth than fiction in the contention of Inspector Chapman (District No. 2), that if these fish are to be preserved more restrictions will have to be placed on the catching of them. The result of another season's fishing might partially determine this question.

ALEWIVES.

There is a very large decrease in the quantity of these fish taken in 1906. Fishermen claim that they are gradually growing scarcer, and if such is the case, no doubt, overfishing is the cause of it. There is no doubt, however, that if another day were added to the weekly close time fishermen would claim it a hardship. If it is a fact that

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alewives are gradually decreasing, I am convinced that some measure should be adopted to protect the parent fish, and probably, free passage for them two days instead of one, in the week, would serve the purpose. The market was brisk last year and I am informed that fish merchants are now anxious to engage next season's catch.

TROUT.

A very great shortage is reported in the catch of these game little fish. I am unable to get, neither am I able to give any good reason for this. I have in mind, though, that as the returns for trout are wholly approximate, it being impossible to collect anything like correct statistics, the discrepancy may, to a great extent be charged to the guessing. I think it a good policy to restock, as often as possible, many of the lakes and streams with fry. This seems to be necessary to keep up the supply. A great deal of pleasure, if not much profit, is obtained in the pursuit of these fish.

PICKEREL.

The catch of pickerel shows a still greater shortage in 1906, than was apparent in 1905, compared with 1904. Statistics for 1906 will not show this, but when it is understood that statistics (for pickerel, and those only, in my district) cover a period of fifteen months instead of twelve, there is a considerable shortage. In explanation of my statement that statistics cover the catch of pickerel alone, for fifteen months, I mean that they are practically the only fish caught from January 1st to March 31st in my district. Overseers still insist that the size of pickerel net mesh should be not less than 3 inches, as immense numbers of very small fish are caught.

BASS.

The catch of bass is so small that it is scarcely worth reckoning. Only three licenses issued by me for 1907.

STURGEON.

There was an increase of about 1,000 lbs. of those fish caught but apparently no increase of caviare got from them, which might indicate that a smaller class of sturgeon was caught then in 1905, and perhaps it is not any indication. I am strongly of the opinion that the government should make more stringent regulations governing the catching of sturgeon. Taken together, fish and eggs, they are a most valuable inhabitant of our waters and should have especial care to see if they cannot be brought to something like their former state in the St. John river.

SYNOPSIS OF REPORTS FROM FISHERY OFFICERS.

KING'S COUNTY

Special Guardian Dunham, on St. John river, reports fishing very good in his district.

S. G. Myers, on Kinnebecasis river, reports fishing not so good as usual and an improvement in conditions regarding sawdust, &c., in the water.

QUEEN'S COUNTY.

Overseer Belyea, Queen's West, reports that fishermen were considerably disappointed in the result of last spring's shad fishing. Fishermen think that pickerel destroy the shad spawn. Prices ruled high, however, and while the public suffered, fishermen got fairly good cash results. He reports his special guardians faithful in their duties.

Overseer Hetherington, Queen's East, reports that salmon seem to be increasing. The catch of shad below the average, he thinks overfishing is the cause. Alewives very plentiful but not much fished for on account of good wages in other employment. Pickerel in abundance but very small size. Pickerel net mesh should be enlarged. Instructions to special guardians well carried out, but he believes many salmon are illegally killed on the head waters of the Salmon and Canaan rivers, far above the settlements.

SUNBURY COUNTY.

Overseer McLean reports all branches of fishing, in his county, below the average in 1906. No violations of the fishery regulations that he is aware of.

YORK COUNTY.

Overseer McKay reports the season of 1906 fishing very much below the average. No reason given. A great influx of foreign sportsmen, particularly on Magaguadavic river and Oromocto and the Kedron lakes, where some expensive cottages were erected and a large amount of money was spent for guides, supplies, &c.

CARLETON COUNTY.

Special Guardian Blake reports a good run of salmon early in the spring, also very plentiful late in the season.

VICTORIA COUNTY.

Overseer Leclair, Victoria district, reports salmon fishing on the Tobique river very much below the average in 1906. Several parties were prosecuted for illegal salmon fishing on the St. John river, and fines collected for the same, also some nets seized and destroyed. Close season strictly observed and the fishway at Plaster Rock, Tobique river, kept in good condition.

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Overseer Gagnon, Madawaska district, reports fishing conditions about as usual. No infractions of the fishery regulations, and his special guardians faithful in their duties.

In conclusion, I may say that in the interests of the fisheries of this district, I visited the site of the Hartt mill dam at Fredericton Junction (Sunbury county), to learn if it were possible to satisfactorily place a fishway in the dam. For two reasons I did not think it advisable, viz., the dam is an old affair and not very high, consequently not very formidable to fish, particularly in the spring time. The other reason is that it is quite an ordinary thing for the ice to break away part of the dam just where a fishway would need to be built. Also, I visited the Plaster Rock fishway at the request of Mr. T. F. Allen, Superintendent of the Tobique Salmon Club. Upon close examination we found that with very little repairs, which the owners of the dam, the Messrs. D. Fraser & Sons, were quite willing to make, it would be satisfactory. At the request of special guardian Parlee, of Sussex (since deceased), I went to Sussex in July, and together we visited the mills of Messrs. Jones Bros., and Mr. J. E. McAuley. Things were not quite satisfactory, but before leaving we convinced the parties that it would be to their interest to give more attention to the better disposal of their mill refuse. Reports since lead me to believe that they took the hint. I wish to thank the officials of your department for prompt and considerate attention to all important matters which I brought to their attention.

I have the honour to be, sir,

Your obedient servant,

H. E. HARRISON,
Inspector of Fisheries.

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RETURN showing the Kinds and Quantities of Fish and Fish Products
Brunswick, for the

Number.	FISHING DISTRICTS.	KINDS											
		Cod, dried, cwt.	Cod, fresh, lb.	Haddock, fresh, lb.	Haddock, dried, cwt.	Haddock, smoked, fin- nan haddies, lb.	Hake, dried, cwt.	Hake, sounds, lb.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.
	<i>Charlotte County.</i>												
1	Lepreau to Red Head	550			8220	68000	5280	3300	35 1260	1000		10	
2	Red Head to Letang	300	8895	60125			700	500	4000				14000
3	Letang to St. George	252	166700		58	53340	452		162	3200			3600
4	St. George to St. Stephen	1445	248000	29800	550	10300	5000	4000	4325	3500			
5	Grand Manan	888			3690	4516	2985	3200	16190	10000			1750
6	Campobello	100		30000					3000				3000
7	West Isles												
8	St. George and vicinity									4000			40000
	Totals	3535	423595	119925	12518	136156	14417	11000	28972	17700	4000	10	62350
	<i>St. John County.</i>												
1	St. John Harbour											800	27000
2	Lepreau to Chance Harbour	3	50000				45	1000					
3	Chance Harbour to Mispec		80000	80000			1098	1050					
4	Mispecto Tynemouth Creek								150				
5	Tynemouth Creek to Albert Co								10				
	Totals	3	130000	80000			1143	2050	160			800	27060
	Grand total	3538	553595	199925	12518	136156	15560	13050	29132	17700	4000	810	89350

SESSIONAL PAPER No. 22

in the Counties of Charlotte and St. John, and Province of New
Year 1906—*Continued.*

OF FISH

Alewives or gaspawan, brls.	Scallops, canned, cans.	Scallops in shell, brls.	Cockles, brls.	Canned sardines, cans.	Sardine herring, brls.	Clams, brls.	Clams, canned, cans.	Clams, shelled, galls.	Flounders, lb.	Tom codor frost fish, lb.	Squid, brls.	Fish oil galls.	Fish as bait, brls.	Fish as manure, brls.	Dulse, lb.	TOTAL VALUE OF ALL FISH.	Number.
																\$ cts.	
.....	24000	2000	.....	2500000	12900	3393	98550	4072	.....	.....	.....	.....	10000	.....	.....	61,199 00	1
.....	.....	.....	.....	600000	6800	1060	48000	.....	1600	.....	15	3490	2800	3725	.....	231,486 00	2
.....	.....	.....	939	.....	66195	250	.....	.....	.....	.....	.....	800	465	150	.....	158,284 55	3
.....	.....	.....	.....	.....	86326	2800	315600	285	.....	.....	.....	.....	2560	.....	.....	193,447 40	4
.....	.....	.....	.....	.....	26350	.....	.....	.....	.....	.....	.....	6000	5500	.....	112000	312,509 20	5
.....	.....	.....	.....	.....	4627	.....	24000	.....	.....	184	11592	1416	.....	.....	.....	105,171 86	6
.....	.....	.....	.....	170000	14952	.....	70200	.....	.....	20	9000	300	.....	.....	.....	55,198 00	7
.....	.....	.....	.....	.....	.....	200	.....	.....	.....	400	.....	.....	.....	.....	.....	3,952 00	8
..	24000	2000	939	3270000	218150	7703	556350	4357	1600	400	219	30882	23041	3875	112000	1,121,248 01	
152 0	.....	.....	.....	.....	9000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	171,290 00	1
.....	.....	.....	.....	.....	375	.....	.....	.....	.....	.....	.....	600	300	.....	.....	10,350 00	2
300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	800	4300	.....	.....	50,517 50	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,550 00	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,735 00	5
15500	.....	.....	.....	.....	9375	.....	.....	.....	.....	.....	.....	1400	4600	.....	.....	243,442 50	
15500	24000	2000	939	3270000	227525	7703	556350	4357	1600	400	219	32282	27641	3875	112000	1,364,690 51	

RECAPITULATION.

Of the Yield and Value of the Fisheries in District No. 1, New Brunswick, comprising the Counties of St. John and Charlotte, for the Year 1906.

Kinds of Fish	Quantity.	Price.		Value.	
		\$	cts.	\$	cts.
Salmon, fresh in ice	Lb. 673,600	0	15	101,040	00
Herring, salted.....	Brls. 8,384	4	00	33,536	00
" fresh and frozen.....	Lb. 666,000	0	01	3,660	00
" smoked.....	" 6,345,665	0	02	126,913	30
" kippered.....	Cans. 172,000	0	10	17,200	00
" boneless and dry kippered.....	Lb. 143,650	0	05	7,182	50
Lobsters, canned.....	Cans. 80,236	0	20	16,047	20
" fresh in shell.....	Cwt. 8,764	10	00	87,640	00
Cod, dried.....	" 3,538	5	00	17,690	00
" fresh and frozen.....	Lb. 553,595	0	04	22,143	80
Haddock, fresh.....	" 199,925	0	03	5,997	75
" dried.....	Cwt. 12,518	3	50	43,813	00
" smoked finnan haddies.....	Lb. 136,156	0	06	8,169	36
Hake, dried.....	Cwt. 15,560	2	50	38,900	00
" sounds.....	Lb. 13,050	0	25	3,262	50
Pollock, dried.....	Cwt. 29,132	3	00	87,396	00
Halibut, fresh.....	Lb. 17,700	0	10	1,770	00
Trout.....	" 4,000	0	12	480	00
Shad.....	Brls. 810	12	50	10,125	00
Smelts, fresh.....	Lb. 89,350	0	08	7,148	00
Alewives.....	Brls. 15,500	5	00	77,500	00
Scallops, canned.....	Cans. 24,000	0	10	2,400	00
" in shell.....	Brls. 2,000	2	00	4,000	00
Cockles.....	" 939	5	00	4,695	00
Sardines, canned.....	Cans. 3,270,000	0	05	163,500	00
" fresh.....	Brls. 227,525	1	50	341,287	50
Clams, in shell.....	" 7,703	1	00	7,703	00
" canned.....	Cans. 556,350	0	10	55,635	00
" shelled.....	Galls. 4,357	0	50	2,178	50
Flounders.....	Lb. 1,600	0	03	48	00
Tom-cod or frost fish.....	" 400	0	03	12	00
Squid.....	Brls. 219	4	00	876	00
Fish oil.....	Galls. 32,282	0	30	9,684	60
" used as bait.....	Brls. 27,641	1	50	41,461	50
" manure.....	" 3,875	1	00	3,875	00
Dulse.....	lb. 112,000	0	06	6,720	00
Total value of catch for 1906				1,364,690	51
" " 1905				1,582,402	60
Amount of decrease for 1906				217,712	09

SESSIONAL PAPER No. 22

RECAPITULATION.

OF the Number and Value of Vessels, Boats, Nets, Weirs, &c., used in the Fisheries of District No. 1, New Brunswick, comprising the Counties of St. John and Charlotte, for the Year 1906.

Number.	Material.	Value.
		\$ cts.
114.	Fishing vessels (tonnage 2,056).....	69,675 00
1,588	" boats.....	111,385 00
2,059	Gill-nets (fathoms 125,177).....	27,331 00
430	Weir seines (fathoms 14,658).....	26,503 00
11	Fish curing factories.....	48,000 00
864	Trawls.....	9,526 00
392	Weirs.....	169,420 00
40	Smelt-nets.....	790 00
3,301	Hand lines.....	2,357 00
*4	Lobster canneries.....	8,500 00
23,711	" traps.....	22,150 00
12	Freezer and ice houses.....	6,100 00
796	Smoke and fish houses.....	178,215 00
331	Piers and wharfs.....	108,150 00
43	Tugs and steamers.....	21,625 00
244	Weir scows and pile drivers.....	6,261 00
	Total value of material.....	815,988 00

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NEW BRUNSWICK—

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., and

Number.		DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR					
			Vessels.				Boats.		Gill-nets.			Trawls.		
			Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.
<i>Restigouche County.</i>														
1	Tide Head to Dalhousie	1	26	500	4	210	450	30	23	6120	5000	.....	.....
2	Below Dalhousie	1	26	500	4	210	3200	385	147	21800	20000	.....	.....
Totals		1	26	500	4	233	3650	415	170	27920	25000	.....	...
<i>Gloucester County.</i>														
3	Beresford and part of Bathurst....	2	29	2300	10	440	10200	890	520	40600	21000	2	40	
4	Caraquet, New Bandon and part of Bathurst	132	1580	55000	510	505	18500	1050	2200	72000	45000	230	1200	
5	Saumarez, Inkerman and Shippegan mainland	24	280	9600	100	260	7200	510	4100	80100	12000	40	200	
6	Shippegan and Miscou islands....	65	821	35000	250	510	23000	1200	1250	45000	18000	140	550	
Totals		223	2710	101900	870	1715	58900	3650	8070	237700	96000	412	1990	
<i>Northumberland County.</i>														
7	Neguac and vicinity	4	50	1800	15	210	7000	450	600	45000	42000	4	80	
8	Bay du Vin and vicinity	2	25	800	6	215	9000	500	750	80000	75000	.....	.....
9	Chatham and vicinity	2	31	1000	10	155	4500	300	450	36000	32000	.....	.....
10	Southwest and Northwest Miramichi rivers .....	..	..	.....	.....	130	2200	160	380	22000	12000	...	..
Totals		8	106	3600	31	710	22700	1410	2180	183000	161000	4	80	
<i>Kent County.</i>														
11	Richibucto, St. Louis, &c.	1	.....	.....	.....	290	10900	475	4750	74800	23200	13	200
12	Buctouche and vicinity	1	10	400	3	600	17000	1025	2300	50000	14000	.....	.....
13	Cocagne and vicinity .....	.....	.....	.....	.....	380	7200	580	1150	28000	8000	.....	.....
Totals ..		1	10	400	3	1270	35100	2080	8200	152800	45200	13	200	
<i>Westmorland County.</i>														
14	Shediac, Moncton, &c .....	.....	.....	.....	.....	460	14000	810	850	40000	17000	.....	.....
15	Botsford .....	.....	.....	.....	.....	485	19000	850	670	21000	9000	.....	.....
16	Sackville and Westmorland .....	.....	.....	.....	.....	250	5000	400	500	10000	4000	.....	.....
17	Dorchester .....	.....	.....	.....	.....	28	1500	55	160	6000	2500	.....	.....
Totals ..		.....	.....	.....	.....	1223	39500	2115	2180	77000	32500	.....	.....
18	<i>Albert County</i>.....	.....	.....	.....	.....	16	600	28	30	3500	2000	.....	.....
Grand totals		333	2852	106400	908	5177	160450	9698	20830	681920	361700	429	2270	

District No. 2.

OR MATERIALS.				LOBSTER PLANT.					KINDS OF FISH.										Number
Smelt-nets		Hand Lines.		Canneries		Traps.		Persons employed in Canneries.	Salmon, fresh, lb.	Salmon, preserved in cans, lb.	Salmon, smoked, lb.	Herring, salted, brls.	Herring, fresh, lb.	Herring, smoked, lb.	Mackerel, fresh, lb.	Mackerel, salted, brls.			
Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.												
142	7100	.....	.....	.....	.....	50	50	.....	125850	.....	.....	.....	.....	.....	.....	.....	.....
26	2000	.....	.....	3	3000	5600	5000	78	150450	200	.....	1370	350000	120000	1000	.....	1
168	9100	.....	.....	3	3000	5650	5050	78	276300	200	.....	1370	350000	120000	1000	.....	2
.....	.....	350	300	5	2600	7800	7000	130	112000	800	1000	13500	170000	35000	4500	5	3	
75	3700	2200	1600	18	11000	25000	23000	540	242000	.....	.....	35000	300000	.....	15000	20	4
175	7700	600	400	7	9000	13000	12000	235	68000	.....	.....	16000	40000	.....	20000	20	5
65	3200	1300	1000	37	30000	56000	52000	1050	.....	2000	1500	18000	100000	.....	30000	20	6
315	14600	4450	3300	67	52600	101800	94000	1945	422000	2800	2500	82500	610000	35000	69500	65	.....	
186	16700	150	200	9	6000	9000	8000	160	126000	.....	.....	11200	10000	15000	3000	.....	7
320	20000	100	150	3	3700	7500	7000	140	210000	.....	.....	4000	20000	10000	75000	.....	8
466	43000	50	70	.....	.....	.....	.....	.....	164000	.....	.....	100	10000	.....	1000	.....	9
.....	.....	.....	.....	.....	.....	.....	.....	.....	125000	.....	4000	.....	.....	.....	.....	.....	10
972	79700	300	420	12	9700	16500	15000	300	625000	.....	4000	15300	40000	25000	79000	.....	.....
351	14240	550	170	13	5500	18000	16000	240	121000	2500	1800	7500	225000	.....	195000	150	11	
255	11030	500	150	26	8000	17000	15000	320	.....	.....	.....	18000	128000	.....	6000	.....	12
80	3500	100	40	6	3500	4000	3800	100	.....	.....	.....	3800	650000	.....	2500	.....	13
386	28740	1150	360	45	17000	39000	34800	660	121000	2500	1800	29300	1003000	.....	203500	150	.....	
150	7500	100	40	26	5800	24000	22000	670	3800	.....	.....	26000	420000	3600000	3000	.....	14
85	3800	70	30	40	12000	55000	50000	1320	.....	.....	.....	18000	100000	640000	3000	.....	15
50	1500	100	40	.....	.....	200	200	4	1000	.....	.....	1200	70000	6000000	1500	.....	16
.....	.....	.....	.....	.....	.....	.....	.....	.....	12000	.....	.....	100	.....	.....	.....	.....	17
285	12800	270	110	66	17800	79200	72200	1994	16800	.....	.....	45300	590000	10240000	7500	.....	.....
.....	.....	.....	.....	.....	.....	300	300	.....	5000	.....	.....	300	10000	.....	.....	.....	.....
26	145020	6170	4190	193	110100	229700	221300	4977	1466100	5500	8300	174070	2603000	10420000	360000	215	18		

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RETURN showing the Kinds and Quantities of Fish and Fish Products in the

Number.	DISTRICTS.	KINDS OF FISH										
		Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lb.	Halibut, lb.	Trout, lb.	Shad, brls.	Smelts, lb.
	<i>Restigouche County.</i>											
1	Tide Head to Dalhousie.....		100							4500		180640
2	Below Dalhousie.....	30000	150	120						4400		75000
	Totals.....	30000	250	120						8900		255640
	<i>Gloucester County.</i>											
3	Beresford and part of Bathurst..	20160	175	3000						10000		2000
4	Caraquet, New Bandon and part of Bathurst.....	182560	600	40000	200	800	2000	2500	65000	12000	40	330000
5	Saumarez, Inkerman and Shippe- gan mainland.....	82000	250	9500	25	400	700	500	15000	5000	60	450000
6	Shippegan and Miscou islands...	520000	200	24000	120	300	200	2500	41000	500		280000
	Totals.....	804720	1225	76500	345	1500	4700	5500	121000	27500	100	1062000
	<i>Northumberland County.</i>											
7	Neguac and vicinity.....	102800	120	1750		200	400	600	2500	7000	200	900000
8	Bay du Vin and vicinity.....	92000	150	600			800	5000	3000	1800	120	580000
9	Chatham and vicinity.....			140		300	60			5000	200	1400000
10	Southwest and Northwest Mira- michi rivers.....									26000	600	15000
	Totals.....	194800	270	2490		500	1260	5600	5500	39800	1120	2895000
	<i>Kent County.</i>											
11	Richibucto, St. Louis, &c.....	228720	250	1380	5	300	2000	2200	2000	4500	150	990000
12	Buctouche and vicinity.....	162000	120	100			300	100		2000		350000
13	Cocagne and vicinity.....	51184	100	120			60			2600		195000
	Totals.....	441904	470	1600	5	300	2360	2300	2000	9100	150	1535000
	<i>Westmorland County.</i>											
14	Shediac, Moncton, &c.....	228000	310	100			60			13000	50	470000
15	Botsford.....	636200	1200	100						8000	20	310000
16	Sackville and Westmorland.....	5000	200							2000	250	95000
17	Dorchester.....			10						3200	1200	
	Totals.....	869200	1710	210			60			26200	1520	875000
18	<i>Albert County.</i>		200							10600	160	5000
	Grand totals.....	2340624	4125	80920	350	2300	8380	13400	128500	121500	2990	6627640

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Counties of District No. 2, Province of **New Brunswick**, for the Year 1906.

AND FISH PRODUCTS.												Seal skins, No.	TOTAL VALUE OF ALL FISH.		Number.
Alewives or Gasperean, brls.	Bass, lb.	Eels, brls.	Oysters, brls.	Clams, brls.	Flounders, lb.	Tom cod or frost fish, lb.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		\$	cts.	
.....	.....	13	.....	.....	30000	20000	.....	40	.....	.....	40	.....	36,982	00	1
.....	.....	40	.....	.....	1400	2000	.....	.....	.....	350	500	.....	56,772	00	2
.....	.....	53	.....	.....	31400	22000	.....	40	.....	350	540	.....	93,754	00	
....	1500	20	.....	1750	15000	14000	15	75	300	1700	25000	8	132,255	00	3
....	8000	210	850	3800	40000	120000	450	800	15000	10000	28000	20	560,190	00	4
150	4000	500	20	8000	15000	30000	150	1400	1200	2000	5000	12	235,570	00	5
....	8000	100	50	2100	12000	10000	200	1100	7000	14000	20000	24	411,015	00	6
150	21500	830	920	15650	82000	174000	815	3375	23500	27700	78000	64	1,339,030	00	
150	10000	180	1300	500	30000	75000	.....	.....	100	2500	10000	...	186,460	00	7
200	5000	300	6000	500	75000	150000	.....	2500	.....	6000	13000	...	199,780	00	8
300	3000	50	500	.....	400000	1200000	.....	.....	40	50	200	.....	161,057	00	9
800	94000	650	.....	.....	.....	65000	.....	.....	60	.....	.....	.....	56,218	00	10
1450	112000	1180	7800	1000	505000	1490000	.....	2500	200	8550	23200	...	603,515	00	
1570	19000	780	750	250	45000	70000	10	450	800	4600	3000	8	244,985	00	11
1000	1600	100	3000	10000	.....	55000	.....	5000	40	6000	13000	...	233,517	00	12
400	1500	120	1400	9000	20000	25000	.....	250	.....	2000	8000	.....	104,256	00	13
2970	22100	1000	5150	19250	65000	150000	10	5700	840	12600	24000	8	582,758	00	
380	4000	200	600	4200	.....	28000	.....	900	.....	16000	50000	.....	355,090	00	14
150	3000	100	350	1800	.....	30000	.....	.....	.....	28000	26000	.....	345,510	00	15
200	2000	75	100	1000	.....	3000	50	.....	.....	6000	5000	.....	154,520	00	16
..	.....	50	.....	.....	.....	6000	.....	100	.....	.....	.....	.....	16,100	00	17
730	9000	425	1050	7000	.....	67000	50	1000	.....	50000	81000	...	871,220	00	
....	600	70	.....	10	.....	30000	.....	.....	40	.....	.....	...	7,612	00	18
5300	165200	3558	14920	42910	683400	1933000	875	12615	24580	99200	206740	72	3,497,889	00	

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RECAPITULATION.

Of the Yield and Value of the Fisheries in District No. 2, New Brunswick, for the Year 1906.

Kinds of Fish.		Quantity.	Price.	Value.
			\$ cts.	\$
Salmon, fresh	Lb.	1,466,100	0 20	293,220
" preserved in cans	"	5,500	0 15	825
" smoked	"	8,300	0 20	1,660
Herring, salted	Brls.	174,700	4 50	783,315
" fresh	Lb.	2,603,000	0 01	26,030
" smoked	"	10,420,000	0 02	208,400
Mackerel, fresh	"	360,500	0 12	43,260
" salted	Brls.	215	15 00	3,225
Lobsters, preserved	Cans.	2,340,624	0 25	585,156
" in shell	Cwt.	4,125	6 00	24,750
Cod, dried	"	80,920	5 00	404,600
" tongues and sounds	Brls.	350	10 00	3,500
Haddock	Cwt.	2,300	3 50	8,050
Hake	"	8,380	2 50	20,950
" sounds	Lb.	13,400	0 25	3,350
Halibut	"	123,500	0 10	12,350
Trout	"	121,500	0 10	12,150
Shad	Brls.	2,990	10 00	29,900
Smelts	Lb.	6,627,640	0 05	331,382
Alewives	Brls.	5,300	4 00	21,200
Bass	Lb.	163,200	0 10	16,520
Eels	Brls.	3,558	10 00	35,580
Oysters	"	14,920	6 00	89,520
Clams	"	42,910	4 00	171,640
Flounders	Lb.	683,400	0 03	20,502
Frost fish	"	1,933,000	0 03	57,990
Squid	Brls.	875	4 00	3,500
Coarse fish	"	12,615	2 00	25,230
Fish oil	Galls.	24,580	0 30	7,374
Fish as bait	Brls.	99,200	1 50	148,800
Fish as manure	"	206,740	0 50	103,370
Seal skins	No.	72	1 25	90
Grand total				3,497,889

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RECAPITULATION.

Of the Number and Value of Vessels, Boats, Nets, Traps, &c., engaged in the Fisheries in District No. 2, **New Brunswick**, in the Year 1906.

Material.	Value.	Total.
	\$ cts.	\$ cts.
233 fishing vessels (2,852 tons)	106,400	
5,177 fishing boats	160,450	
681,920 fathoms gill-nets	361,700	
429 trawls	2,270	
185 bass-nets	1,260	
2,426 smelt-nets	145,020	
6,170 hand-lines	4,190	
		781,290
193 lobster canneries	110,100	
229,700 lobster traps	221,300	
		331,400
189 freezers and ice-houses	72,300	
443 fish and smoke-houses	44,600	
51 piers and wharfs	40,400	
72 tugs and smacks	22,700	
921 smelt shanties	15,400	
		195,400
Totals		1,308,090

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DISTRICT No. 3, NEW BRUNSWICK, 1906.

RECAPITULATION of the Fisheries yield in the Inland Counties, N.B.

Kinds of Fish.		Quantity.	Price.	Value.
			\$ cts.	\$ cts.
Salmon	Lb.	42,640	0 20	8,528 00
Shad, fresh	"	65,050	0 05	3,252 50
" salted	Brls.	620	10 00	6,200 00
White fish	Lb.	6,450	0 15	967 50
Trout	"	75,100	0 10	7,510 00
Bass	"	200	0 08	16 00
Pickarel	"	106,500	0 07	7,455 00
Alewives, fresh or smoked	"	47,900	0 02	958 00
" salted	Brls.	1,725	3 00	5,175 00
Sturgeon	Lb.	10,800	0 08	864 00
Eels	Brls.	7	10 00	70 00
Coarse and mixed fish	"	375	2 00	750 00
Caviare	Lb.	1,000	0 90	900 00
Total				42,646 00

NOTE.—For the yield by counties see recapitulations of the whole province, page 126.

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RECAPITULATION of the Material of Fishing in District No. 3, New Brunswick, 1906.

Material.	Number.	Value.
		\$ cts.
Men employed.	1,487	
Vessels (tonnage, 30)	2	600 00
Boats	886	9,945 00
Gill-nets (fathoms)	50,275	20,800 00
Rods and lines	1,845	4,650 00
Cottages, smoke and ice-houses and freezers	157	11,010 00
Total		47,005 00

NOTE.—For localities of District No. 3 see general recapitulation of N.B., page 124.

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RECAPITULATION showing the Number, Tonnage and Value of Vessels, Boats and other Fishing Materials, &c.,
New Brunswick—Continued.

COUNTIES.	FISHING GEAR OR MATERIALS.						LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.										
	Weirs.		Smelt-nets.		Hand Lines.		Canneries.		Traps.		Persons employed in canneries.		Freezers and Ice-house.		Smoke and Fishhouses.		Piers and wharfs.		Tugs, steamers & smacks.		
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Value.	Persons employed in canneries.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
<i>District No. 1.</i>																					
1 Charlotte.....	364	159420	34	370	3191	2277	4	8500	18586	17592	50	6	2400	735	156415	222	95000	42	20525	1	2
2 St. John.....	28	10000	6	420	115	80	.....	.....	5125	4558	...	6	3700	61	21800	109	13150	1	1100	2	
<i>District No. 2.</i>																					
3 Albert.....	285	12800	270	110	66	17800	79200	300	.....	.....	68	3600	180	14200	14	2700	4	4000	4
4 Westmorland.....	686	28740	1150	360	45	17000	39000	34800	660	14	9400	13	1700	16	4500	1	2500	5	5
5 Kent.....	972	79700	300	420	12	9700	16500	15000	300	46	24500	129	11700	1	10000	19	6000	6	6
6 Northumberland.....	315	14600	4450	3300	67	52600	101800	94000	1945	53	18300	116	16100	19	23000	43	6500	7	7
7 Gloucester.....	168	9100	.....	.....	3	3000	5650	5050	78	8	16500	2	800	1	200	5	3700	8	8
8 Restigouche.....
<i>District No. 3.</i>																					
9 Victoria.....	*595	1400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 Carleton.....	300	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11 York.....	350	1400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 Sunbury.....	100	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13 Queen's.....	250	550	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 King's.....	250	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	392	169420	2466	145810	11316	11197	197	118600	253411	243450	5027	201	78400	1396	233825	382	148550	115	44325		

* From No. 9 to 14, the numbers are rods and line instead of the regular band lines for sea fishing.

RECAPITULATION showing the Kinds and Quantities of Fish and Fish Products in the Province of New Brunswick, for the Year 1906.

COUNTIES.		KINDS OF FISH.														Number.					
		Salmon, fresh, lb.	Salmon, preserved in cans, lb.	Salmon, smoked, lb.	Herring, salted, brls.	Herring, fresh, lb.	Herring, smoked, lb.	Mackereel, fresh, lb.	Mackereel, salted, brls.	Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, dried, cwt.	Haddock, smoked, Hman haddies, lb.	Hake, dried, cwt.	Hake sounds, lb.	Pollock, cwt.	Halibut, lb.	Number.
District No. 1.																					
1	Charlotte	6400	.....	.....	7384	664500	6345665	.....	.....	80236	7080	3535	.....	119925	12518	136156	14417	11000	28972	17700	1
2	St. John	667200	.....	.....	1000	1500	.....	.....	.....	.....	1684	3	.....	80000	.....	.....	1143	2050	160	.....	2
District No. 2.																					
3	Albert	5000	.....	.....	300	10000	.....	7500	.....	869200	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
4	Westmorland	16800	.....	.....	45300	590000	10240000	.....	.....	.....	1710	210	.....	.....	.....	.....	60	.....	.....	.....	4
5	Kent	121000	2500	1800	29300	1003000	.....	203500	150	441904	470	1600	5	.....	300	.....	2360	2300	.....	2000	5
6	Northumberland	625000	.....	4000	15300	40000	25000	79000	.....	194800	270	2490	.....	.....	500	.....	1260	5600	.....	5500	6
7	Gloucester	422000	2800	2500	82500	610000	35000	69500	65	804720	1225	76500	345	.....	1500	.....	4700	5500	.....	121000	7
8	Restigouche	276300	200	.....	1370	350000	120000	1000	.....	30000	250	120	.....	.....	.....	.....	.....	.....	.....	.....	8
District No. 3.																					
9	Victoria	5500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
10	Carleton	1000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
11	York	23140	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
12	Sunbury	1500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
13	Queen's	1500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13
14	King's	10000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
Totals		2182340	5500	8300	183084	3260000	16765665	360500	215	2420860	12889	84458	350	199925	14818	136156	23940	26450	29132	146200	

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RECAPITULATION showing the Kinds and Quantities of Fish and Fish Products in the Province of New Brunswick, for the Year 1906.

COUNTRIES.	KINDS OF FISH.												FISH PRODUCTS.				TOTAL VALUE OF ALL FISH.	Number.	
	Trout, lb.	Shad, brls.	Smelts, lb.	Alewives or Gaspereau, brls.	Bass, lb.	Pickarel, lb.	Eels, brls.	Sardines, fresh, brls.	Oysters, brls.	Clams, brls.	Flounders, lb.	Tom cod or frost fish, lb.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.			Fish as manure, brls.	Seal skins, No.
District No. 1.																			
1 Charlotte	4000	10	62350	.....	.....	.....	218150	.....	.....	7703	1600	400	219	.....	30882	23041	3875	.....	1
2 St. John	.....	800	27000	15500	.....	.....	9375	.....	.....	.....	.....	.....	.....	.....	1400	4600	.....	.....	2
District No. 2.																			
3 Albert	10000	100	5000	.....	600	.....	70	.....	1650	7000	.....	30000	.....	1000	40	.....	.....	.....	3
4 Westmorland	26200	1520	875000	730	9000	.....	425	.....	1650	7000	.....	67000	50	1000	.....	50000	81000	.....	4
5 Kent	9100	150	1535000	2970	22100	.....	1000	.....	5150	19250	65000	150000	10	5700	840	12600	24000	8	5
6 Northumberland	39800	1120	2895000	1450	112000	.....	1180	.....	7800	1000	505000	1490000	.....	2500	200	8550	23200	.....	6
7 Gloucester	27500	100	1062000	150	21500	.....	830	.....	920	15650	82000	174000	815	3375	23500	27700	78000	64	7
8 Restigouche	8900	.....	255640	.....	.....	.....	53	.....	.....	.....	31400	22000	.....	40	.....	350	540	.....	8
District No. 3.																			
9 Victoria	16750	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	.....	50	.....	.....	.....	.....	9
10 Carleton	15000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25	.....	.....	.....	.....	10
11 York	30000	50	.....	50	.....	30000	.....	.....	.....	.....	.....	.....	.....	100	.....	.....	.....	.....	11
12 Sunbury	1000	50	.....	800	.....	30000	.....	.....	.....	.....	.....	.....	.....	60	.....	.....	.....	.....	12
13 Queen's	2350	305	.....	725	.....	41500	.....	.....	.....	.....	.....	.....	.....	75	.....	.....	.....	.....	13
14 King's	10000	200	.....	150	200	5000	.....	.....	.....	.....	.....	.....	.....	65	.....	.....	.....	.....	14
Totals	200000	4420	6716990	22525	165400	106500	3565	227525	14920	50613	685000	1933400	1094	12990	56862	126841	210615	72	4,905,225 51

* For all items not enumerated here as whitefish, sturgeon, &c., see p. 122.

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RECAPITULATION.

OF the Yield and Value of the Fisheries of the whole Province of **New Brunswick**,
for the Year 1906.

Kinds of Fish.		Price.	Quantity.	Value.	Total value.
		\$ cts.		\$ cts.	\$ cts.
Salmon, fresh	lb.	..	2,182,340	402,788 00	405,273 00
" preserved	cans.	0 15	5,500	825 00	
" smoked	lb.	0 20	8,300	1,660 00	
Herring, salted	brls.	4 50	183,084	816,851 00	1,209,236 80
" fresh	lb.	0 01	3,269,000	32,690 00	
" smoked	"	0 02	16,765,665	335,313 30	
" kippered	"	..	315,650	24,382 50	
Mackerel, salted	brls.	15 00	215	3,225 00	46,485 00
" fresh	lb.	0 12	360,500	43,260 00	
Lobsters, preserved in cans	"	0 25	2,420,860	601,203 20	713,593 20
" in shell	cwt.	..	12,889	112,390 00	
Cod, dried	"	5 00	84,458	422,290 00	447,933 80
" fresh	lb.	0 04	553,595	22,143 80	
" tongues and sounds	brls.	10 00	350	3,500 00	
Haddock, dried	cwt.	3 50	14,818	51,863 00	
" fresh	lb.	0 03	199,925	5,997 75	66,030 11
" as finnan haddies	"	0 06	136,156	8,169 36	
Hake, dried	cwt.	2 50	23,940	59,850 00	63,462 50
" sounds	lb.	0 25	26,450	6,612 50	
Pollock	cwt.	3 00	20,132	..	87,396 00
Halibut	lb.	0 10	146,200	..	14,620 00
Trout	"	0 10	200,600	..	20,140 00
Shad, salted	brls.	..	4,420	46,225 00	49,477 50
" fresh	lb.	0 05	65,050	3,252 50	
Smelts	"	..	6,716,990	..	338,530 00
Bass	"	0 10	165,400	..	16,536 00
Alewives	brls.	..	22,844	..	104,833 00
Eels	"	10 00	3,565	..	35,650 00
Sardines, fresh	"	1 50	227,525	341,287 50	504,787 50
" preserved in cans	cans.	0 05	3,270,000	163,500 00	
Pickarel	lb.	0 07	106,500	..	7,455 00
Sturgeon	"	0 08	10,800	864 00	1,764 00
" caviare	"	0 90	1,000	900 00	
Whitefish	"	0 15	6,450	..	967 50
Flounders	"	0 03	685,000	..	20,550 00
Frost fish or tom cod	"	0 03	1,933,400	..	58,002 00
Oysters	brls.	6 00	14,920	..	89,520 00
Clams and quahaugs	"	..	50,613	179,343 00	237,156 50
" canned and shelled	"	..	..	57,813 50	
Scallops	..	..	..	..	6,400 00
Cockles	brls.	5 00	939	..	4,695 00
Squid	"	4 00	1,094	..	4,376 00
Coarse and mixed	"	2 00	12,990	..	25,980 00
Dulse	lb.	0 06	112,000	..	6,720 00
Oil	Galls.	0 30	56,862	..	17,058 60
Bait	brls.	..	126,841	..	190,261 50
Manure	"	..	210,615	..	107,245 00
Seal skins	No.	..	72	..	90 00
Total for 1906		4,905,225 51
" 1905		4,847,090 60
Increase		58,134 91

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RECAPITULATION.

Of the Number of Fishing Crafts, Nets, &c., in the whole Province of **New Brunswick**, for the Year 1906.

Number.	Articles.	Value.	Total.
		\$	\$
349	Fishing vessels (4,938 tons)	176,675	
7,651	" boats	281,780	
857,392	Fathoms of gill-nets	409,831	
430	Seines (14,658 fathoms)	26,503	
2,466	Smelt-nets	145,810	
185	Bass-nets	1,260	
1,293	Trawls	11,796	
392	Weirs	169,420	
11,316	Hand lines and rods and lines	11,197	
197	Lobster canneries	118,600	1,234,272
253,411	" traps	243,450	
			362,050
201	Fish freezers and ice-houses	78,400	
1,396	Fish and smoke houses	233,325	
382	Fishing piers and wharfs	148,550	
115	Fishing tugs and smacks	44,325	
921	Smelt shanties	15,400	
244	Scows and pile drivers	6,261	
11	Fish curing factories	48,000	
			574,761
	Total		2,171,083

STATEMENT of the number of men engaged in the Fisheries of **New Brunswick**, 1906.

Number of men in vessels	1,461
" " boats	13,016
" persons in lobster canneries	5,025
Total	19,502

APPENDIX No. 4.

PRINCE EDWARD ISLAND.

REPORT ON THE FISHERIES OF PRINCE EDWARD ISLAND FOR THE
YEAR 1906, BY INSPECTOR J. A. MATHESON.

CHARLOTTETOWN, January 2, 1907

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the fisheries of the Province of Prince Edward Island for the year 1906, together with the tabulated statistics, showing the catch in detail in each county and locality, also synopsis of reports of overseers for the past year, with brief references to the principal features with seasons operations.

I am pleased to be in a position to state that our most important fishery viz.: lobsters shows an increase, which some fishermen claim is owing to the hatcheries in New Brunswick and Nova Scotia. Should such be the case, we may also expect good results from the hatchery in this province.

I also have to report an increase in the total values as follows:

1905	\$998,921
1906	1,168,939
Increase	170,018

LOBSTERS.

I have to report an increase of 893,036 lbs. lobsters, which goes to show that notwithstanding the large number of men engaged in this fishery, that this season shows a fair average for the last ten years.

OYSTERS.

I have again to report a shortage in this industry, and would recommend that spring fishing be abolished, which would meet the approval of both fishermen and shippers.

MACKEREL.

I am pleased to have to report a small increase in this fishery, the fish were smaller than for some years, and took the hook more freely. A few schools were taken at Rustico late in the season.

COD.

I have also to report an increase in the codfishery of 2,636 quintals over last season. With the high prices obtained by our fishermen, the financial results were satisfactory.

HAKE.

There was a small increase in the catch of this fish for which fishermen realized good prices.

HERRING.

Show an increase of about one thousand barrels over last year's catch, a good many were exported, and the balance principally used for bait.

QUAHAUGS

There was a large increase in the quantity of quahaugs taken, which were shipped to the New York markets and brought fair prices. This fishing gives employment to a great number of men.

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A good deal of trouble was experienced to control fishermen from infringing on oyster areas, as the regulations were not very clear. Some more definite regulations should be enacted to more properly regulate this fishery, which is assuming large proportions.

SMELTS.

Smelt fishing was about equal to that of last season, and was remunerative to fishermen.

TROUT.

This fishery was about as usual, Great disappointment was felt that trout spawn were not placed in the hatchery at Southport instead of salmon.

SYNOPSIS OF OVERSEERS' REPORTS.

Overseer Davison, Prince County reports a large increase in the catch of herring, they were plentiful and largely used for bait. A quantity were caught at Alberton which were salted and exported.

Mackerel were more plentiful, especially around Alberton. There was an increase of lobsters, due to the hatcheries, as the lobsters in the straits were plentiful but small in size. On the north side they were not so plentiful, but larger.

There was a good deal of windy weather, which shortened the catch on the north side of the Island, and a lot of fishing gear was destroyed.

Cod show a decrease in this county. The fishermen say the dogfish struck in early, and they had to take up their trawls, they scarcely got any fall fish.

There was a large decrease in oysters; the reason given by fishermen is that the starfish are destroying all the small oysters. Quahaug fishing is practically a new industry, a large quantity being fished last year, giving employment to great numbers of men. There was a good deal of trouble last season in keeping quahaug fishermen from destroying the oyster beds.

There were a few violations of the lobster regulations, the guilty parties were fined. Oyster fishermen claim they made as much money this year as last, as prices were better.

Overseer McCormack, Kings County, reports as follows: Lobsters were first packed the 22nd of April, the total pack in this county is short of last year by 16,752 lbs., were it not for the scarcity of bait the early part of the season and ten days of stormy weather the last of May, no doubt, the pack would exceed last year.

Cod struck on the 10th May, a fine shoal of large fish, this branch of the fishery prosecuted vigorously with good results.

Hake fishing commenced about the first of July, and good fishing continued until the first December, showing a large increase over last year's catch. Mackerel were scarce all through the season, fair catches were made on the north side the first part of October out in deep water, and only large boats could get out so late in the season.

The result of the foregoing conditions show, with no more men engaged than last year, an increase of \$11,734, which I attribute largely to the fact that the fishermen were able to sell their fish or most of it green to the Souris fish drier, thereby losing no time salting and drying their fish.

I regret to say that several cases of illegal lobster fishing were reported from the southern part of the county, the parties were prosecuted and fined, and cases are now pending against others which I expect to convict, two persons were fined for netting trout.

I am, sir,

Your obedient servant,

J. A. MATHESON,

Inspector of Fisheries.

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RETURN showing the Kinds and Value of Fish, &c., in the County of Prince, Province of Prince Edward Island, for the Year 1906.

Number.	DISTRICTS.	KINDS OF FISH.														FISH PRODUCTS.				TOTAL VALUE OF ALL FISH.	Number.					
		Mackerel, fresh, lb.	Mackerel, salted, brls.	Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lb.	Pollock, cwt.	Halibut, lb.	Trout, lb.	Smelts, lb.	Alewives or Gaspereau, lb.	Eels, brls.	Oysters, brls.	Quahaugs, bags.	Flounders, lb.	Squid, brls.			Coarse and mixed fish, brls.	Fish oil, galls.	Fish at bait, brls.	Fish as manure, brls.	
<i>Prince County.</i>																										
1	Tignish...	1000	350	155050	1000	1000	60	1200	3000	...	...	...	400	...	3	...	...	...	...	...	...	1200	5000	...	63,387 50	1
2	Nail Pond...	...	83	72980	103	103	135	400	...	...	...	...	...	...	...	...	...	...	...	...	...	210	850	...	27,108 00	2
3	Skinner's Pond...	16000	122	50000	440	440	111	200	600	...	...	...	...	...	...	...	...	...	15000	...	...	535	920	100	26,994 00	3
4	Minnegash...	...	301	57600	653	653	1237	...	...	...	500	7000	...	...	8	...	...	...	...	3	25	950	1222	...	31,201 00	4
5	Alberton...	...	499	49644	695	695	...	...	...	...	...	35000	...	...	5	300	2000	...	...	...	...	250	1100	...	38,571 00	5
6	Narrows, Lot 11...	...	...	46232	76	76	...	...	...	...	...	4000	...	...	...	...	...	...	...	...	...	...	...	...	13,385 00	6
7	Ellerslie, Lot 12...	...	...	38890	300	300	10	100	10	800	...	...	...	...	...	...	800	100	...	...	...	150	1150	...	24,432 50	7
8	Bideford...	...	...	4080	...	...	...	...	...	...	...	20000	...	...	5	1529	3200	...	...	...	...	...	...	...	17,794 00	8
9	Grand River...	...	...	3024	...	...	...	...	...	...	...	21150	...	...	...	1700	5000	...	...	...	...	...	...	...	22,791 00	9
10	Malpeque...	...	72	12384	358	358	...	...	...	...	...	10000	...	...	10	2450	...	...	...	...	...	80	356	...	22,993 00	10
11	Richmond Bay...	...	50	...	10	80	...	...	...	...	...	...	...	...	...	2155	500	...	...	...	...	20	500	...	16,666 00	11
12	Roxbury, Lot 6...	...	...	...	105	105	...	...	...	...	...	9760	...	...	8	24	...	...	...	...	...	...	...	...	1,547 00	12
13	Fifteen Point...	...	...	142128	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	45,372 00	13
14	Brae...	...	...	14 Brae...	...	...	...	...	...	...	...	...	...	15	...	50	20000	...	...	...	...	...	...	...	45,030 00	14
15	West Point...	...	...	39600	20	20	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11,170 00	15
16	Travellers Rest...	...	...	...	25	25	...	...	...	...	...	5000	...	...	4	1000	1200	...	...	...	...	...	...	...	9,150 00	16
17	Summerside...	...	...	6528	60	60	...	...	...	...	...	70000	...	...	5	140	60	...	...	...	...	...	...	...	6,983 50	17
18	Carleton...	...	...	28416	...	...	...	...	...	...	...	2000	...	...	...	100	...	...	...	...	...	...	...	...	8,524 00	18
19	Tryon...	...	...	94464	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25,778 50	19
20	Wellington...	...	...	79248	20	10	...	...	...	...	...	200	10000	...	10	500	1332	...	...	...	...	...	...	...	29,083 50	20
Totals...		17000	1477	892728	90	3897	181	2882	4000	10	800	700	194310	25	58	10748	33392	15000	3	25	3395	22796	205	...	487,243 50	
Values...		2040	22155	223182	630	19485	633	8646	1000	25	80	70	9715	100	580	64488	66784	450	12	50	1018	34194	205	...	487,243 50	

RETURN showing the Number and Value of Vessels, Boats, Nets, &c., and the Quantity and Value of all Fish in the County of Queen's, Province of Prince Edward Island, for the Year 1906.

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						LOBSTER PLANT.				KINDS OF FISH.					Number.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Vessels.			Boats.			Gill-nets.			Smelt-nets.		Hand-lines.	Canneries.		Traps.		Salmon, fresh, lb.	Salmon, preserved in cans, lb.	Herring, salted, brls.	Herring, fresh, lb.	Mackerel, fresh, lb.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.		Value.	Number.	Value.	Number.							Value.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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SESSIONAL PAPER No. 22

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Queen's, Province of Prince Edward Island, for the Year 1906—Continued.

DISTRICTS.		KINDS OF FISH AND FISH PRODUCTS.																			TOTAL VALUE OF ALL FISH.	
Number.		Mackerel, salted, brls.	Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lb.	Trout, lb.	Smelts, lb.	Alewakes or Gas- pereau, brls.	Eels, brls.	Oysters, brls.	Clams, brls.	Squid, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Quahangs, bags.	\$ cts.
1	Tracadie.....	285	110672	100	2070	15	5000	15	15	25	1500	75000	200	200	1800	50	25	750	2166	20	1000	73,335 75
2	New London.....	400	69840		750	15			100		600	50000			80	5		800	1716	90		36,590 00
3	Point Prim.....		78384		80						750	28000		60	885	15			2645	400	1000	34,558 50
4	Rustico.....	1000	108960	75	3750	20	10000				2000	40000	275	40			1000	2540	210			94,045 00
5	Wheatley River.....				1000	10					1000	22000						50				6,315 00
6	Pownal.....		20160									1000			275				528		1000	9,532 00
7	Charlottetown.....			150								35000								400	4000	12,200 00
8	Craband.....		49216									15000		20			10		1416	300		15,718 00
9	Lot 65.....		44832	25	1200							70000			1050				1520	400	6000	42,663 00
10	Bays and rivers.....										5000	45000	250	150	150					450		8,050 00
	Totals.....	1685	482064	350	8780	60	15000	15	115	25	10850	381000	450	705	4240	120	25	2600	12531	2270	13000	.....
	Values.....\$	25275	120516	2450	43900	600	450	52	345	6	1035	19050	1800	7050	25440	480	100	780	18796	2270	26000	333,007 25

RETURN showing the Number and Value of Vessels, Boats and Nets, the Quantity and Value of all Fish in the County of King's, Province of Prince Edward Island, for the Year 1906.

DISTRICTS.	FISHING VESSELS AND BOATS.					FISHING GEAR OR MATERIALS.					LOBSTER PLANT.			KINDS OF FISH.													
	Vessels.		Boats.			Gill-nets.		Trawls.		Smelt-nets.		Hand- lines.	Canner- ies.	Traps.		Salmon, fresh, lb.	Herring, salted, brls.	Herring, fresh, lb.	Mackerel, fresh, lb.	Mackerel, salted, brls.							
	Number.	Tonnage.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.			Number.	Value.												
<i>King's County.</i>																											
1	Souris and Red Point	5	68	200	21	55	1000	94	350	5000	3000	40	400	4	120	100	200	4	2000	6800	4000	100	1000	2000	60	1	
2	Bay Fortune					33	350	48	50	1000	500	5	50	6	180	50	100	2	2000	4200	3000	30	1500		36	2	
3	Annandale					34	850	45	300	6000	2500	15	150	3	90	100	200	6	7000	20800	14000	50	1000	500	50	3	
4	Georgetown	3	167	2500	17	70	3000	114	400	8000	4000	30	300	6	180	100	200	4	5000	14000	10000	300	3000	1000	100	4	
5	Murray Harbour, North					53	2000	63	300	6000	3000	6	60			100	200	12	7000	30800	20000		1500		40	5	
6	" " South	10	225	5000	50	50	1000	82	200	4000	2000	60	600	1	35	400	600	6	2000	10300	7000	200	4500		155	7	
7	Morell and St. Peters					69	1500	124	200	4000	1500	20	200	16	480	100	200	8	6000	17000	10000	10000	2000	3000	100	8	
8	Naufrage					36	3500	54	150	2500	1200	5	50			50	100	5	4000	10000	8000		2000	500	50	9	
9	North Lake					50	800	87	100	2000	1000	6	60			100	200	4	3000	7000	5000		1000	500	100	10	
10	East Lake					40	500	70	150	2500	1500	60	600	1	30	100	200	1	2000	2000	1500	120	2000		60	10	
Totals		18	460		88	490		781	2200	41000		247		37		1200		52		122900		950	19500	7500	691		
Values			\$ 7700				\$ 14500				20200		2470		1115		2200		40000		82500		2080	4750	195	900	10365

RECAPITULATION by Counties showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., in the Province of Prince Edward Island, for the Year 1906.

FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.									
DISTRICTS.										DISTRICTS.									
Vessels.					Boats.					Gill-nets.					Seines.				
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Number.	Fathoms.	Value.	Number.	Fathoms.
<i>Counties.</i>										<i>Counties.</i>									
1 King's	18	460	7700	88	490	14500	781	2200	41000	20200	5	2000	2	500	247	2470	37	1115	1200
2 Prince	8	153	3400	43	780	26115	1379	2330	44563	11441	3	1950	2	1500	96	946	100	2484	508
3 Queen's	8	143	2920	46	655	15100	1240	1880	20825	12235	9	1200	10	350	145	1000	90	2700	1250
Totals	34	756	14020	177	1925	55715	3400	6410	112388	43876	14	3150	14	2350	489	4416	227	6299	2958
DISTRICTS.										DISTRICTS.									
Canneries.					Traps.					Persons employed in Canneries.					Freezers and Ice-houses.				
Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Number.	Value.	Number.	Value.	Number.
<i>Counties.</i>										<i>Counties.</i>									
1 King's	52	40000	122900	82500	800	1	2000	114	1980	11	2150	14	2700	1	2700	14	2700	1	2700
2 Prince	84	33355	115220	79092	923	3	3000	13	1740	9	7700	2	2100	2	2100	2	2100	2	2100
3 Queen's	52	23295	74825	42615	488	1	1500	.....	.....	3	300	1	1000	1	1000	1	1000	1	1000
Totals	188	96650	312945	204207	2211	5	6500	127	3720	23	10150	17	5800						

OTHER FIXTURES USED IN FISHERIES.

LOBSTER PLANT.

DISTRICTS.		KINDS OF FISH AND FISH PRODUCTS.																	Number.
		Salmon, fresh, lb.	Salmon, preserved in cans, lb.	Herring, salted, brls.	Herring, fresh, lb.	Mackerel, fresh, lb.	Mackerel, salted, brls.	Lobsters, preserved in cans, lb.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lb.	Pollock, cwt.	Halibut, lb.	Number.	
1	King's	10400	.....	950	19500	7500	691	914496	.....	8315	58	11500	405	7315	14630	.....	1	1
2	Prince	1500	.....	6221	29500	17000	1477	892728	90	3897	.....	.....	181	2882	4000	10	800	2
3	Queen's	200	100	5900	226500	39500	1685	482064	350	8780	60	15000	15	115	25	.....	.....	3
	Totals	12100	100	13071	275600	64000	3853	2289258	440	20992	118	26500	601	10312	18655	10	800		

Districts.		Kinds of Fish and Fish Products.																Total VALUE OF ALL FISH.	Number.
Counties.		Trout, lb.	Smelts, lb.	Alewives or Gaspe- reau, brls.	Eels, brls.	Sardines.	Oysters, brls.	Clams, brls.	Flounders, lb.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Quahaugs, bags.	Canned clams in cases.			
1 King's	10600	128000	115	114	160	125	15000	120	250	6550	9800	1320	370	348,689	00	1			
2 Prince	700	194310	25	58	10748	4240	15000	3	25	3395	22706	205	35392	487,243	50	2			
3 Queen's	10850	331000	450	705	4240	120	15000	25	25	2600	12581	13000	333,007	25	3				
Totals		22150	703310	590	877	160	14988	245	15000	148	275	12545	45127	2475	47712	370	1,168,939		

7-8 EDWARD VII., A. 1908

RECAPITULATION.

SHOWING Yield and Value of the different Fisheries of the Province of Prince
Edward Island, during the Year 1906.

Kinds of Fish.	Quantity.	Price.	Value.
		\$ cts.	\$ cts.
Salmon, fresh	Lb. 12,100	0 20	2,420 00
" smoked	" 100	0 15	15 00
Herring, salted	Brls. 13,071	5 00	65,355 00
" fresh	Lb. 275,600	0 01	2,756 00
Mackerel, fresh	" 64,000	0 12	7,680 00
" salted	Brls. 3,853	15 00	57,795 00
Lobsters, cans	Lb. 2,289,288	0 25	572,322 00
" fresh in shell	Cwt. 440	7 00	3,080 00
Cod, dried	" 20,992	5 00	104,960 00
Tongues and sounds	Brls. 118	10 00	1,180 00
Haddock, fresh	Lb. 26,500	0 03	795 00
" dried	Cwt. 601	3 50	2,103 50
Hake, dried	" 10,312	3 00	30,936 00
" sounds	Lb. 18,655	0 25	4,663 75
Pollock	Cwt. 10	2 50	25 00
Halibut	Lb. 800	0 10	80 00
Trout	" 22,150	0 10	2,215 00
Smelts	" 703,310	0 05	35,165 50
Alewives or Gaspereaux	Brls. 590	4 00	2,360 00
Eels	" 877	10 00	8,770 00
Caplin	" 160	3 50	560 00
Oysters	" 14,988	6 00	89,928 00
Clams	" 245	4 00	980 00
Clams in cases	Cases. 370	5 00	1,850 00
Quahags	Bags. 47,712	2 00	95,424 00
Flounders	Lb. 15,000	0 03	450 00
Squid	Brls. 148	4 00	592 00
Coarse and mixed fish	" 275	2 00	550 00
Fish oil	Galls. 12,545	0 30	3,763 50
Fish as bait	Brls. 45,127	1 50	67,690 50
Fish as manure	" 2,475	1 00	2,475 00
Total for 1906			1,168,939 75

SESSIONAL PAPER No. 22

RECAPITULATION.

SHOWING the Number and Value of Vessels, Boats, Nets, Lobster Canneries, Traps &c.,
used in fisheries of the Province of Prince Edward Island for the season
of 1906.

Articles.	Value.	Total.
	\$	\$
34 fishing vessels (756 tons).....	14,020	
1,925 " boats.....	55,715	
6,410 gill-nets (112,388 fathoms).....	43,876	
14 seines (3,150 fathoms).....	3,800	
14 trap-nets.....	2,350	
488 trawls ..	4,416	
227 smelt-nets.....	6,299	
2,958 hand-lines.....	3,191	133,667
188 lobster canneries.....	96,650	
312,945 lobster traps.....	204,207	300,857
5 freezers and ice-houses.....	6,500	
127 smoke and fish houses.....	3,720	
23 piers and wharfs.....	10,150	
17 steamers and smacks. .	5,800	26,170
Total.....		460,694

Number of persons employed in the fisheries of Prince Edward Island :—

Men in fishing vessels.	177
Men in fishing boats.....	3,400
Persons in lobster canneries.....	2,211
	5,788

APPENDIX No. 5.

PROVINCE OF QUEBEC.

GULF OF ST. LAWRENCE DISTRICT, BY INSPECTOR WM. WAKE
HAM, M.D., GASPÉ BASIN.

INLAND DISTRICTS, BY INSPECTORS JOSEPH RIENDEAU, OF MONT-
REAL, AND A. H. BELLIVEAU, OF OTTAWA.

GASPÉ BASIN, April 1, 1907.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit herewith the annual report on the fisheries of the Gulf of St. Lawrence Division, province of Quebec, for the season just closed, with synopses of the reports of some of the local officers, and the statistics showing the quantities and values of the year's catch in the division.

The returns show a slight increase in the value of the catch as compared with the previous season. Speaking in a general way the summer fishing was good, but owing to the unusual severity of the weather in the fall, there was practically no fall fishery. Owing to the great demand for labour all over the country, and the high wages paid, the number of hands engaging in the fishery is decreasing, and those who do engage in the fishery do so for a much shorter season than formerly. Agents from the large lumber firms, in the west, visit the coast in August and September, and fishermen are shipped to the woods well before the close of the usual summer fishing. It is becoming annually more difficult to engage men for the fishing, and the men offering are of an inferior class, as the best, most active and enterprising are those who leave the coast to find work elsewhere.

HERRING.

The spring herring fishery opened at the end of April, and the schools of herring visiting the usual spawning grounds were quite as abundant as usual. At the Magdalen Islands a large revenue is derived from the sale of this herring to vessels coming from the United States, the maritime provinces and Newfoundland. Many cargoes are each spring taken to Eastport and Lubec, in Maine, to be smoked. These fish are carried in bulk, slightly salted. Very few of the visiting vessels attempt to take their own fish, the usual practice being to purchase the quantity required from those who fish the seines and traps owned at the Islands. In the Bay des Chaleurs a large part of the spring herring taken is used for manure, and applied directly to the land. Some of our fishing outfitters object to this practice, as it is undoubtedly the case that herring for bait has become scarcer during the summer months. As there does not seem to be any diminution in the volume of spring herring which visits the coast, I cannot see that this manner of using the herring can be blamed for the scarcity along shore during the rest of the season. The great schools of herring visit the regular spawning grounds with remarkable constancy, but having spawned they leave the shores and we know practically nothing of their movements until they return in the spring.

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COD.

The first cod were taken about the middle of May, and at times the fishery was exceedingly good. The extent of the codfishery, however, depends very largely upon the supply of fresh bait, and this was often scarce and difficult to procure in July and August. Bait freezers have been established at many points along the coast, but there exists an unaccountable prejudice on the part of the fishermen against the use of the frozen bait. If they cannot have absolutely fresh bait they prefer to remain ashore and waste their time in idleness. Time, and the example of those who are intelligent enough to use the frozen bait, may overcome this prejudice, but the fixed ideas of an ignorant people are hard to eradicate. Several of our leading fishing firms, years ago, put up freezers at their own expense, and tried to induce the fishermen to use the frozen bait when no other could be had, but the fishermen persistently refused to use it, and the idea was finally abandoned. Had we had an average fall fishing, the season would have been a splendid one, as in spite of the uncertainty of the bait supply the summer fishing was fair. The fall, however, was exceedingly rough, and though fish and bait were abundant, the boats could not venture out. One storm succeeded another with such frequency that every one became discouraged, and the boats were put ashore and fishing abandoned long before the usual date of closing. The price of cod was unusually high, so that those who stuck to the fishing did well.

SALMON.

The yield of the salmon fishery was good, the best of recent years. The catch on the north coast of the Gulf was even greater than that of the previous season, which west of Natashquan was considered phenomenal, while on the south coast, in Bonaventure and Gaspé the catch was one of the best we have had for many years.

	1905.	1906.	Increase 1906.
	Lbs.	Lbs.	Lbs.
Bonaventure County.....	115,600	225,909	110,309
Gaspé do	148,650	228,834	80,784
Saguenay do	457,361	500,752	43,391
	721,011	955,495	234,484

The catch on the rivers was not a large one, due no doubt in part to the heavy take in the nets, but the weather was warm and dry, and the water fell rapidly, so that with the clear, low water, and the high temperature, it was not astonishing that fly fishermen hardly made as good averages as usual.

LOBSTERS.

The returns from the lobster canners show a total of 798,800 lb. cans, which means a decrease in the pack of 49,834 lbs. It is useless to ignore the fact that in the Gulf Division lobsters are becoming scarcer. This has been perfectly apparent for some years. At the Magdalen Islands the pack has been slightly increased by allowing fishing in September, but if as seems quite clear the fishery is a failing one, then this September fishing can only hasten the end. We can only compare it to 'burning the candle at both ends.' There is no wish, as far as I can gather at the Magdalen Islands to see this open season in September continued. It has never paid any one, and it simply offers an excuse to go and poach in the lagoons. No intelligent packer or fisherman at the Islands was ever in favour of this open September season. It was understood

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that it would be continued for three years as an experiment. As the three years are now up, it is hoped that the fall fishing for lobsters will be discontinued.

MACKEREL.

The returns for the mackerel fishing at the Magdalen Islands show a catch of 7,178 brls. This is a considerable increase over the catch of 1905, and as the prices paid for mackerel were high, the fishermen did well. Mackerel were not taken anywhere else in the Gulf Division.

I beg to append synopses of some of the reports made by the local fishery officers.

I am, sir,

Your obedient servant,

WM. WAKEHAM,

Officer in charge of the Gulf of St. Lawrence Division.

SYNOPSIS OF REPORTS OF SOME OF THE LOCAL OFFICERS.

George Forest, F. O., Bonaventure Sub-division, reports that the catch of spring herring was fair—but that both summer and fall herring failed. The codfishery was good up to the middle of July, but during the rest of the summer fishing, it was nil—owing to want of bait—while during the fall months October and November there was little or no fishing owing to bad weather. The lobster pack shows a falling off. The salmon net fishing was much better than last year.

F. X. Chapados, F. O., Port Daniel sub-division, reports spring herring as having been abundant all along his coast. The lobster pack continues steadily to diminish. The salmon fishing was a good one—better than for some years. The cod fishing, which began towards the end of May, was good up to the end of July—but after that amounted to nothing owing to the ravages of the dogfish, shortness of bait and rough weather. No fall herring were taken, this was due to the constant rough weather keeping the herring off shore.

A. T. Carter, F. O., Gaspe sub-division, reports that the salmon fishery shows quite an increase as compared with 1905. Salmon struck in early in May, and kept a steady run during the whole season—the rivers were well stocked and the fly fishermen had generally good sport. Spring herring were not over-plentiful, but were of a large size—herring bait was generally taken throughout the season. The catch for fall salting was limited, and the size small. Squid were fairly plentiful throughout the season, but caplin and launce were scarce. Cod fishing began about the 20th May, and the catch shows a considerable increase over 1905—owing to the number of mills now operating in the vicinity, a large number of the best fishermen leave off early in the season, and either work at the mills or go to the camps to secure winter work. This of course handicaps the fishing considerably. Lobsters show a slight increase but the size is small. The government will have to take some steps to save this valuable industry. Smelt show a decrease but the price was good. Heavy gales prevailed after the 3rd October, doing considerable damage to property, and preventing the fishermen from carrying on the fall fishery.

Louis Letourneau, F. O., Mont Louis sub-division, reports—the salmon net fishing along this coast as having been very abundant, and the prices obtained good—neither mackerel nor white whales were seen on the coast. Dogfish only remained on this part of the coast for one week. Spring herring were plenty, and remained along the coast until the end of June, when they disappeared, and herring were scarce until the beginning of September, when they returned, and good catches were made especially in the western part of the sub-division. Cod struck the coast about the 10th May, and

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were abundant up to the 1st November, good fishing was made whenever bait was obtainable.

J. A. Chevrier, F. O., Magdalen Islands, reports—that the season of 1906 opened successfully, as a large number of seals were taken on the ice—the spring herring catch was as good as in previous years—these fish seem to be as abundant as ever. The lobster fishing has not been good, being 30 per cent less than in 1905—this decrease was, however, partly due to bad weather. It is Mr. Chevrier's opinion that the fall lobster fishing season from 1st to 30th September should be cancelled, he believes that the fishing should begin about the 20th April, and end on the 20th July, and then end.

Spring mackerel fishing was much better than in 1905, while the summer mackerel fishing and the cod fishing were good also. Mackerel were not as abundant on the northern islands, as about the southern ones. All things considered, the fishermen of the islands had a fairly successful season.

N. A. Comeau, F. O., reports for the Godbout sub-division. The season was a most remarkable one as regards salmon, the fish were early in coming, the first being taken on the 20th May. They came at once in large numbers, and remained plentiful until the close of the season in July. This is the record year—the catch being several thousand pounds in excess of any previous season—very few grilse were seen—the absence of these young salmon was also noted in other parts of the gulf. The cod fishery was a good one, wherever bait was plentiful—capelin were unusually abundant, large quantities having been washed ashore on the beaches by the surf—herring were abundant in April and May, and in some sections even in June—but afterwards they disappeared entirely. Halibut are on the increase both in number and size, and the catch was a good one—a few schools of mackerel were seen off St. Nicholas, Godbout, and Egg Island, but only a few odd ones were taken in the herring nets. It is now about 20 years since mackerel were taken off this coast in paying quantities. There was a very great scarcity of trout and very few were taken by the anglers after the 15th July—the supposition was that they had gone up the river early owing to the low water, but Mr. Comeau does not believe that this was the cause, he thinks rather, that the scarcity was due to a disease, a sort of fungus, to which trout are liable when the water is low and warm. This same trouble occurred some years ago—then many dead trout were found along the sea shore—but this year only a few dead fish were noticed. Ground sharks and dogfish did not trouble the fishermen this season. Very few were taken by fishermen, in the halibut trawls—while whales were seen in immense numbers, and a few were killed by hunters along the north shore. The harbour seal holds its own, in spite of its being hunted at all seasons—the increased value of its skin making it much sought after. The immense herds of harp seals that used to be seen yearly, from Saguenay down, have quite disappeared. Neither squid nor horse mackerel were seen on the coast.

Théotime Migneault, F.O., Moisie sub-division, reports that salmon netting began at Moisie on the 18th May, and that the fishing was good between the 1st and 25th June. There was a slight decrease in the catch in the river nets, due to high water during the season of fishing. The cod fishery was fair, showing an increase in the catch over 1905. Herring were taken in the spring but failed entirely in the autumn. The catch of halibut fell off, due to the scarcity of herring. Seventy-two (72) whales yielding 180,000 galls. of oil, were taken by the Quebec Steam Whaling Co. The fishery regulations were well observed.

R. Joncas, F. O., Natashquan sub-division, reports that cod fishing began at the end of May, and the yield was an ordinary one. Caplin came early and remained on the coast till the 20th of August. The salmon net fishing in the Natashquan river was good, while the sea coast nets did fairly well. The lobster pack was about as usual. The change in the method of collecting the fees for salmon net licenses has reduced the collections from this source by fully one-half. The regulations were well observed.

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REPORT ON THE INLAND DISTRICT FROM THREE RIVERS TO THE
U. S. BOUNDARY LINE BY INSPECTOR JOSEPH RIENDEAU.

MONTREAL, May 22, 1907.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my report on the fisheries of my district for the year 1906.

The territory under my supervision extends from the head of Lake St. Francis, in line with the county of Huntington to the county of Nicolet, on the south shore, and from the county of Soulanges to the county of Champlain, on the north shore.

In the course of my inspection trips, I have ascertained with much satisfaction that in several parts of my district the conditions of the fisheries are very much improved. To begin with Lake St. Francis, on the south shore, the laws and regulations are, in general, thoroughly respected. The exceptions are indeed very few. On the north shore, from Coteau Landing to Vaudreuil, if the fishery overseers would only give more care and attention to their duties, I would be able to report the same progress.

On the whole, I have come to the conclusion that the fish has visibly increased in growth and in size, except perhaps the sturgeon. This fish has been so mercilessly slaughtered in the past, that it will take some years before we shall see it again on our markets where it is so much appreciated. As it is now, we only see small ones.

In Lake St. Louis, the fishermen are of opinion that the fish caught by night lines are noticeably in better condition than in past years. If the fishermen could be persuaded to observe the law more scrupulously I have no doubt that in the near future great changes for the better would take place.

The Lake of Two Mountains is nearly ruined through abuses unconsciously perpetrated. There is hardly enough fish for the ordinary wants of the population. I respectfully submit that an end should be put to the gill and hoop-net fishing in that lake. I receive complaints most every day from that part of the country against the fishermen who act as if there was no law in existence. If these waters were closed to nets of any kind, for a certain period of time, I am of opinion that the results would be promptly noticed. I think that petitions to that effect have been sent to the federal authorities.

From Laprairie to Lake St. Peter, on both sides of the river, the law has been fairly respected.

I am sorry to say that I cannot pay the same compliment to the Lake St. Peter fishermen. I may safely state that since the first official inspection made by me on these fishing grounds, I have never seen so large a quantity of hoop-nets as now used in the Counties of Yamaska, Berthier and Maskinongé. In one of my visits I tried to ascertain the number of implements used by the fishermen in these places which form the boundaries of Lake St. Peter, and I obtained the following results: In the county of Richelieu, 47 hoop-nets; in Yamaska county, 814, with altogether 11,475 fathoms of leaders; in Berthier and Maskinongé counties I found 290 hoop-nets and 260 fathoms of leaders. And this statement does not comprise the county of St. Maurice and the nets set up in the woods during the spring freshets when the fish go up the little streams for spawning. The game fish and the sturgeon have certainly decreased by two-thirds during the period of the last three years. Soft fish is very scarce and of small size.

What must not be lost sight of is that Lake St. Peter is the best expanse of water in this district for the production of fish if it was tended with all the care it is entitled to. In all the bays and the surrounding woods there are enormous quantities of insects and worms which constitute an excellent food. Unhappily the fishermen will not give fish time to grow.

The minnow nets are regular slaughtering implements. Ten per cent of every hundred minnows taken with these nets are used, the remainder die as soon as taken,

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for they are packed like sardines in small reservoirs and no care is taken of them though it represents a great part of the food for the bigger fish.

I respectfully suggest that in Lake St. Peter a stop should be put to fishing with hoop-nets for a certain number of years.

The same may be said of the county of Nicolet; careless and illegal fishing has exhausted the fish supply.

In other places where trout fishing is done, the conditions are slightly improved in comparison with the past, since the law has forbidden the market exportation to the United States. In my opinion, the trout ought not to be offered on the market or anywhere else for sale, and that for some years to come. Speckled trout fishing should be tolerated only in sporting cases and for family uses.

Severe punishment should also be meted out to people setting box traps or *nasses* in small rivers or streams where the fish go to spawn.

Sporting men are also often the first law breakers in catching great quantities of fish that they do not even use and which are left on the spot. I am of opinion that there should be a law by which a fixed number of fish could be taken daily and determining the length and size, the remainder to be thrown back in the water. The efficiency of such a measure should be soon established.

If the provincial overseers would only do their duty and have a look to the illegal fishing in the great and numerous lakes in the northern part of my district, the report on the yield of fish would also be more gratifying.

In conclusion, I may say that, with the exception of Lake St. Peter, the law is fairly well observed in all the fishing grounds of my district.

The whole respectfully submitted.

JOS. RIENDEAU,
Inspector of Fisheries.

REPORT ON THE INLAND DISTRICT OF QUEBEC, BY INSPECTOR A. H. BELLIVEAU, FOR THE YEAR 1906.

To the Dominion Commissioner of Fisheries.

SIR,—To better establish comparisons in the yields of the different kinds of fish with those of previous years, the former sub-divisions have been, as much as possible, adhered to, even when under different officers.

Since the provincial authorities do not require statements of the actual catch of fish from their own officers, especially in the inland districts, where there is little or no commercial fishing carried on, it becomes very difficult to secure any reliable data. Now that one government grants fishing privileges, and the other seeks statistical information, it should be easier for both to attain their object.

North Shore District.—The most important change in the Saguenay and Lake St. John districts is the refusal of all netting licenses in those inland waters by the provincial authorities. It will prove a most difficult undertaking to completely eradicate all vestige of netting at all times. The settlers have enjoyed this privilege for such a long period, that they will now consider it a hardship to be deprived of it.

The Blue Point Indian reserve is now the only exception where netting may still be indulged in by the residents for their own domestic use.

The famous Ouananiche was fairly abundant last season in these waters. Quite a few were captured by anglers, especially in the immediate neighbourhood of the discharges of the lake. Let us hope that the Indians will not destroy more than they actually need for their supply, nor abuse the privilege thus granted them. It is the opinion of many that these game fish are still plentiful in the tributaries of the Lake St. John. Because but few were captured in nets, it does not follow that the species was exhausted, but that their sportive qualities enable them to detect the nets and shun them.

I have been informed that some of the true salmon have been captured in Lake St. John or its tributaries weighing as much as nine pounds, and one large specimen reaching sixteen pounds. It is now quite a few years since salmon-fry were distributed in Lake St. John for the first time. Our officer at Tadousac has for the last few years given an annual supply of ova to the Beemer hatchery for this district.

A very important point would be to ascertain if any of these salmon have ever descended to the sea and returned to their native waters by ascending the *déscharges* rapids of this great lake, the head of the Saguenay. If salmon of such a size have actually been captured in that lake, it would almost prove that some at least have gone to the sea and returned. Our fish culture officer at Tadousac will endeavour soon to establish proofs of the above.

Naturally the recent prohibition of net fishing will somewhat curtail the production of fish in Lake St. John, especially the kinds which do not take the hook. While there will not be enough for commercial purposes without nets, it is hoped that sufficient captures will be effected to enable residents to secure what they require for their own consumption.

The local Government active guardian for the whole Saguenay river, residing at Tadousac, reports the seizure of only twenty-nine nets all along this large stream last season. He therefore concludes, that poachers are not quite so numerous as formerly, but there would still be room for improvement. Salmon were reported plentiful on their different spawning beds last year, which promises well for the future.

South Shore Districts.—The large catch of the previous year in the lower part of this division was again maintained last season. Again large quantities of cod were captured and disposed of in a green state. Sardines were again plentiful, and great quantities were secured. The latter fishery was also quite remunerative in the county of Temiscouata, where most of this product was exported to the United States.

Eel fishing was also much more remunerative than during 1905, and would have been still better, had not some of the former fishermen, discouraged by the failure of the few previous seasons, neglected to repair and otherwise attend to their fisheries.

If the fishermen of Temiscouata districts better knew how to prepare their herring by the improved methods taught to the Bay of Chaleurs fishermen by an expert, they would derive better profits from this industry. Now their herring only realizes from twenty-five cents to a dollar per barrel.

At Isle Verte, the fishermen, besides their fishing operations, also enjoy the privilege of saving and preparing *eel-grass*, which grows in the vicinity. About \$30,000 worth of this marine product was, last year, exported to the United States, where it is used for upholstering purposes.

In the vicinity of Levis, fish were not so abundant as during the previous season, but prices were more remunerative and the fishermen were satisfied at the total result. Shad, however, seem to be steadily disappearing from the neighbouring shores.

The Island of Orleans encircled by its hundred weirs, now yields, almost entirely eels. Their capture of last season was satisfactory, although not quite up to that of former years.

Missisquoi Bay and Richelieu River.—The fisheries of this district seem to withstand the annual drain of its numerous seines better than any other part of my district. The depletion of fish in the bay is not felt much and as good catches as ever were effected during the short time that fishing is allowed therein. The high prices realized at that early fishing period are very enticing to its participants. Hence the reluctance with which these old seiners abandon what they consider an old vested right.

As the principal object seems to be to protect pickerel, or doré and bass (the other species being considered as coarse fish unworthy of protection), it would seem that this object would be attained if none of the two above mentioned species were retained out of the water say after 1st of April. More real protection would then be accorded to the better species by fishing out the inferior kinds as perch, pike, bull-heads, &c., &c.

The large eel weirs at Iberville rapids on the Richelieu river yielded as much as ever, but their owners had more trouble than usual in securing remunerative markets. Their lower weir at St. Therese has been flooded by a big dam to raise the river level for the electrical purposes of the big Power Company of Chambly.

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Angling for black bass was again very good last season in the vicinity of St. Jean and Iberville.

Eastern Townships.—This part of my district is well supplied with fine large bodies of water or streams as Memphremagog, Megantic, Massawippi, Aylmer, St. Francis, Brompton Lakes, &c. All being of easy access are visited by neighbouring residents and poachers who sometimes forget that all kinds of netting is prohibited in all the Eastern Townships. It is my opinion where there are no licenses issued, the provincial officers are not so much in evidence as they should be.

Respectfully submitted,

A. H. BELLIVEAU,
Inspector of Fisheries.

PROVINCE OF QUEBEC—Gulf of St. Lawrence District.
RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., in the County of Bonaventure.
Province of Quebec, for the Year 1906.
RESTIGOUCHE SUBDIVISION (Head of Tide to Maguacha).

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.								LOBSTER PLANT.					
		Vessels.			Boats.			Gill Nets.		Seines.		Trawls.		Hand Lines.		Canneries.	Number.	Value.	Number.	Value.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.					
1	<i>Bonaventure County.</i>																				1
1	Restigouche					20	400	83		5000	4500										

BONAVENTURE SUBDIVISION (Maguacha to Paspébiac Point).

	1	2	3	4	5	6	7	8											
1	Maguacha and Nouvelle.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Carleton	150	1500	150	412	8000	7000	6	165	165	...	...	...	...	...	...	...	...	...
3	Maria	165	1800	160	612	12000	9000	5	145	145	...	...	...	...	...	...	...	...	...
4	New Richmond and Black Capes.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Capelin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Bonaventure	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	New Carlisle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Paspébiac.	8	470	10000	40	1345	12600	1320	3804	75400	44200	133	3940	3940	60	600	2610	1305	1100
	Totals.	8	470	10000	40	1345	12600	1320	3804	75400	44200	133	3940	3940	60	600	2610	1305	1100

PORT DANIEL SUBDIVISION (Paspébiac Point to Point Macquereau).

	1	2	3	4	5	Totals								
1 Hopetown	40	1200	50	1470	1170	15	350	400	40	925	950	285	3	800
2 Nouvelle	76	2250	125	1725	1625	16	375	450	35	850	1000	325	.....	.....
3 Shigawake	25	540	30	65	1450	1250	8	200	25	325	320	125	2	550
4 Port Daniel	170	5650	295	380	5900	5900	30	750	925	125	1800	375	4	1550
5 Anse à Gascons	175	7550	312	450	10000	7800	20	550	750	160	2400	425	2	350
Totals	486	17190	812	1050	22875	17745	89	2225	2775	375	6300	4620	11	3250

RESTIGOUCHE SUBDIVISION (Head of Tide to Maguacha).

Districts.	Kinds of Fish.	Fish Products.	Total Value of All Fish.	Number.
Bonaventure County.			\$ cts.	
1 Restigouche	Salmon, fresh. lb. Herring, salted, brls. Herring, lb. Herring, smoked, lb. Lobsters, preserved in cans, lb. Lobsters, fresh in shell, cwt. Cod, dried, cwt. Cod, tongues & sounds, brls. Haddock, fresh, lb. Haddock, dried, cwt. Hake, dried, cwt. Halibut, lb. Trout, lb. Smelts, lb. Eels, brls. Tom cod or frost fish, lb.	Fish oil, galls. Fish as bait, lb. Fish as manure, brls.	75409 150 60000 40000 3000	20,856 80 1

BONA VENTURE SUBDIVISION (Maguacha to Paspebiac Point).

	1	2	3	4	5	6	7	8										
1. Maguacha and Nouvelle.	7000	100	4000	.....	60	3000	.....	.....	200	.....	.....	.....	30	10	6000	5,374 00
2 Carleton.	34000	400	4000	5000	144	10	60	.....	600	.....	.....	.....	30	20	9000	14,063 00
3 Maria.	40000	700	6000	15000	15	150	.....	9	4000	1000	22	6000	25	30	10000	18,802 75	
4 New Richmond and Black Capes.	25000	150	3000	3000	10	50	.....	2000	.....	12000	.....	.....	25	10	6000	10,422 50
5 Capelin.	400	500	6000	3360	30	1600	.....	60	.....	800	.....	.....	800	300	12000	18,110 00
6 Bonaventure.	15000	400	500	10000	4752	15	2400	3	.....	16000	.....	.....	1200	500	15000	29,996 75
7 New Carlisle.	1000	20	3000	2000	10	75	.....	2000	5	.....	.....	.....	35	20	8000	5,910 50
8 Paspelbac.	60	6000	7000	10	4000	6	7000	150	400	800	35000	4	2000	1000	30,589 50
Totals.	122000	2290	36000	48000	8256	70	8395	9	39000	255	342	400	34400	56000	54	11000	4195 1890	133,269 00

PORT DANIEL SUBDIVISION (Paspebiac Point to Point Macquereau).

	1	2	3	4	5
1 Hopetown	150	1700	15	200	20
2 Nouvelle	200	1800	12	300	35
3 Shigawake	100	900		40	500
4 Port Daniel	17500	4600	20	80	65
5 Anse à Gascons	11000	5300	30	900	75
Totals	28500	14500	77	2240	195
	1450	40368	....	8050	8900
	23700	14736	....	1000	2000
	3700	16008	....	2500	15000
	5000	13464	....	550	18
	10000	2160	....	3000	4500
	1500		....	2500	2000
	2000		....	1000	1100
	2500		....	1500	10600
	3000		....	2000	122,296
	3500		....	2500	75
	4000		....	3000	15,465
	4500		....	3500	00
	5000		....	4000	1
	5500		....	4500	2
	6000		....	5000	3
	6500		....	5500	4
	7000		....	6000	5
	7500		....	6500	6
	8000		....	7000	7
	8500		....	7500	8
	9000		....	8000	9
	9500		....	8500	10
	10000		....	9000	11
	10500		....	9500	12
	11000		....	10000	13
	11500		....	10500	14
	12000		....	11000	15
	12500		....	11500	16
	13000		....	12000	17
	13500		....	12500	18
	14000		....	13000	19
	14500		....	13500	20
	15000		....	14000	21
	15500		....	14500	22
	16000		....	15000	23
	16500		....	15500	24
	17000		....	16000	25
	17500		....	16500	26
	18000		....	17000	27
	18500		....	17500	28
	19000		....	18000	29
	19500		....	18500	30
	20000		....	19000	31
	20500		....	19500	32
	21000		....	20000	33
	21500		....	20500	34
	22000		....	21000	35
	22500		....	21500	36
	23000		....	22000	37
	23500		....	22500	38
	24000		....	23000	39
	24500		....	23500	40
	25000		....	24000	41
	25500		....	24500	42
	26000		....	25000	43
	26500		....	25500	44
	27000		....	26000	45
	27500		....	26500	46
	28000		....	27000	47
	28500		....	27500	48
	29000		....	28000	49
	29500		....	28500	50
	30000		....	29000	51
	30500		....	29500	52
	31000		....	30000	53
	31500		....	30500	54
	32000		....	31000	55
	32500		....	31500	56
	33000		....	32000	57
	33500		....	32500	58
	34000		....	33000	59
	34500		....	33500	60
	35000		....	34000	61
	35500		....	34500	62
	36000		....	35000	63
	36500		....	35500	64
	37000		....	36000	65
	37500		....	36500	66
	38000		....	37000	67</

RETURN showing the Number and Value of Vessels and Boats, Nets, &c., in the County of Gaspé, in the Province of Quebec, for the Year 1906.

GRAND RIVER SUBDIVISION (Point Macquereau to Barachois.)

DISTRICTS.	FISHING BOATS.				FISHING GEAR OR MATERIALS.								LOBSTER PLANT.	
	Boats				Gill-nets.				Seines.				Hand Lines.	
	Number.	Value.	Men.		Number.	Fathoms.	Value.		Number.	Fathoms.	Value.		Number.	Value.
<i>Gaspé County.</i>														
1 Newport	169	5000	411	354	5418	2709	\$	70	2	70	80	\$	774	387
2 Pabos	31	2248	69	91	2990	1536		3	3	90	145		256	128
3 Grand River	121	5100	347	340	7200	3298		3	105	95	1310		724	362
4 Cape Cove	102	4230	286	220	5850	2200		5	200	180	42		658	329
5 Percé and Bonaventure Island	43	2700	128	134	2680	1072		4	150	450	13		275	137
6 Corner of Beach	14	700	30	42	1750	2030		.....	.....	.....	2		82	41
Totals	480	19978	1271	1181	25888	12845		17	615	910	193		2769	1384

GASPÉ BAY SUBDIVISION (Barachois to Fame Point.)

DISTRICTS.	FISHING BOATS.				FISHING GEAR OR MATERIALS.								LOBSTER PLANT.	
	Boats				Gill-nets.				Seines.				Hand Lines.	
	Number.	Value.	Men.		Number.	Fathoms.	Value.		Number.	Fathoms.	Value.		Number.	Value.
<i>Gaspé County.</i>														
1 Barachois and Malbaie	118	6955	211	211	3165	2954		17	1300	1000	.....		633	253
2 Point St. Peter	20	980	30	33	660	495		1	50	40	.....		99	40
3 Chien Blanc to Sandy Beach	183	9150	324	322	4830	4508		16	950	800	.....		966	386
4 Gaspé North and South	5	250	7	16	1290	1100		.....	.....	.....	.....		12	5
5 Peninsula to Little Gaspé	38	1900	72	60	1200	1200		5	250	225	.....		170	72
6 Grande Grève to Ship Head	49	2450	59	73	1525	1500		3	150	120	.....		224	90
7 Cape des Rosiers to Jersey Cove	114	5700	232	223	3345	3791		4	80	65	.....		669	267
8 Griffin Cove	60	3600	152	132	1920	1640		1	25	20	.....		393	157
9 Fox River	115	6900	216	220	4400	3300		6	180	85	.....		664	265
10 Little Cape to Fame Point	106	5250	189	186	2890	3328		.....	.....	.....	.....		558	233
Totals	808	43135	1472	1474	25225	23816		53	2985	2355	.....		4388	1768
													4	3700

SESSIONAL PAPER No. 22

RETURN showing the kinds and quantities of Fish and Fish Products in the County of Gaspé, in the Province of Quebec, for the year 1906.

GRAND RIVER SUBDIVISION (Point Macquereau to Barachois)

Number	DISTRICTS.	KINDS OF FISH.												Fish as manure, brls.	Fish as bait, brls.	Fish oil, galls.	Fish as manure, brls.	TOTAL VALUE OF ALL FISH.	Number.
		Salmon, fresh, lb.	Herring, salted, brls.	Herring, smoked, lb.	Lobsters, preserved in cans, lb.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lb.	Haddock, dried, lb.	Halibut, lb.	Smelts, lb.								
<i>Gaspé County.</i>																			
1	Newport.....	10138	200	...	14560	4000	3	610	10	1800	9500	2000	1800	800	30,974 90	1			
2	Pabos.....	36219	88	...	10628	1400	...	...	...	...	5000	700	450	500	18,725 80	2
3	Grand River.....	7100	350	...	10176	7233	15	...	30	...	5000	3650	2000	300	46,614 00	3			
4	Cape Cove.....	2200	300	8000	24000	5000	...	...	75	1000	...	2500	1500	100	36,405 00	4	
5	Percé and Bonaventure Island.....	...	75	...	5424	4050	...	...	25	...	...	2025	1500	...	24,913 50	5
6	Corner of Beach.....	28800	20	...	7344	980	...	...	...	...	2000	490	300	...	13,293 00	6
Totals.....		84457	1033	8000	72132	22663	18	610	140	2800	21500	11365	7550	1700	170,926 20				

GASPÉ BAY SUBDIVISION (Barachois to Fame Point.)

1	Barachois and Malbaie.....	7000	275	.....	10200	7798	.....	.....	.....	.....	3000	5198	1175	.....	47,786 90	1
2	Point St. Peter.....	1000	50	.....	18000	8762	.....	.....	.....	.....	.....	785	233	.....	6,670 00	2
3	Chien Blanc to Sandy Beach.....	11504	250	.....	.....	146	.....	.....	.....	.....	41496	5841	1788	.....	56,235 10	3
4	Gaspé North and South.....	69409	30	.....	.....	2179	.....	.....	.....	.....	.....	97	25	.....	16,903 26	4
5	Peninsula to Little Gaspé.....	6560	40	.....	.....	5311	.....	.....	.....	.....	.....	1453	328	.....	13,334 90	5
6	Grande Grève to Ship Head.....	9804	50	.....	.....	2704	.....	.....	.....	.....	.....	1803	511	.....	17,038 20	6
7	Cape des Rosters to Jersey Cove.....	.....	80	.....	.....	5311	.....	.....	.....	.....	.....	3541	1235	.....	29,869 80	7
8	Griffin Cove.....	.....	100	.....	.....	3400	.....	.....	.....	.....	.....	2967	983	.....	19,654 60	8
9	Fox River.....	.....	100	.....	.....	6521	.....	.....	.....	.....	.....	4347	1258	.....	36,296 10	9
10	Little Cape to Fame Point.....	.....	95	.....	.....	6018	.....	.....	.....	.....	.....	4112	974	.....	33,229 60	10
	Totals.....	105277	1070	.....	28200	43966	.....	.....	.....	.....	44496	29344	8510	.....	277,078 40	

RETURN showing the Number, Value of Vessels and Boats, Nets, &c., in the County of Gaspé, in the Province of Quebec, for the Year 1906.

MONT LOUIS SUBDIVISION (Fame Point to Claude River).

Number.	DISTRICTS.			FISHING BOATS.				FISHING GEAR OR MATERIALS.						LOBSTER PLANT.		KINDS OF FISH..							TOTAL VALUE OF ALL FISH.	Number.
	Number.	Value. \$	Men.	Gill-nets.			Seines.		Hand Lines.		Canner-ies.		Salmon, fresh, lb.	Herring, salted, brls.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Halibut, lb.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.				
				Number.	Fathoms.	Value. \$	Number.	Value. \$	Number.	Value. \$	Number.	Values. \$												
<i>Gaspé County.</i>																								
1	Grand Etang to Chloxydorme.....	72	3200	135	260	7800	5000	3	110	65	270	270	1	300	2200	70	6350	10	7600	3170	1140	....	35,529 00	1
2	Petite Anse to Frigate Point.....	35	650	58	120	3000	1600	....	....	116	116	....	....	....	....	35	1880	12	5400	940	450	....	10,814 00	2
3	Grand and Little Vallée.....	58	2100	99	165	4950	2750	1	30	20	198	200	....	....	1700	35	2885	..	17000	1442	760	130	17,087 60	3
4	Magdalen.....	33	600	50	70	2100	1000	....	....	95	96	....	....	....	4000	125	1050	8	18000	525	300	....	7,902 50	4
5	Manche d'Epée to Gros Mâle.....	45	676	61	90	2700	1400	....	....	122	122	....	....	....	1100	350	1000	....	11000	500	250	....	7,825 00	5
6	Anse Pleureuse and Mont Louis....	77	2775	105	210	6300	4950	1	30	20	210	210	....	....	11000	220	3550	10	14000	1775	500	120	22,912 50	6
7	Rivière à Pierre and Claude.....	60	725	92	125	3750	2600	....	....	182	182	....	....	....	6000	250	700	..	10800	350	200	70	6,714 00	7
Totals.....		380	10720	600	1040	30600	19300	5	170	105	1194	1196	1	300	26000	1085	17415	40	83800	8702	3600	320	108,784 60	

SESSIONAL PAPER No. 22

RETURN showing the Number, Value of Vessels and Boats, Nets, &c., in the County of Gaspé, in the Province of Quebec, for the year 1906.—*Continued.*

STE. ANNE DES MONTS SUBDIVISION (Claude River to Cape Chatte).

Number.	FISHING BOATS.			FISHING GEAR AND MATERIALS.						LOBSTER PLANT.		KINDS OF FISH.						TOTAL VALUE OF ALL FISH.	Number.
	Number.	Value.	Men.	Gill-nets.		Seines.		Hand Lines.		Canner-ies.	Fish as manure, brls.	Fish oil, galls.	Halibut, lb.	Cod, tongues and sounds, brls.	Cod, dried cwt.	Herring, salted, brls.	Fish as bait, brls.		
				Number.	Fathoms.	Value.	Number.	Value.	Number.											Value.	Number.	Value.
1Marsonis and Martin River.	4	120	8	6	140	100	...	16	16	...	...	1800	36	1400	70	20	...	1,043 00	1
2Cap au Renard and Anse à Jean.	4	72	5	4	82	60	...	10	10	...	...	41	42	360	37	10	...	451 90	2
3Ste. Anne's.	110	1775	158	188	4100	2973	...	316	316	...	...	2046	5300	9900	1940	350	...	21,134 00	3
4Cape Chatte.	45	927	69	41	1110	582	...	82	82	...	...	940	6000	5400	830	70	...	7,831 00	4
Totals	163	2894	240	239	5432	3715	...	424	424	...	...	3109	17060	2877	450	...	...	30,459 90	

RETURN showing the Number and Value of Vessels and Boats, Nets, &c., in the County of Gaspé Province of Quebec,
for the Year 1906.

MAGDALEN ISLANDS SUBDIVISION—SOUTH.

Number.	FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.						LOBSTER PLANT.			
	Vessels.				Boats.		Gill-nets.				Seines.		Trap-nets.		Hand-lines.	Canneries.	Traps.			
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.			
Districts.																				
Gaspé County.																				
1	Entry Island	6	240	26	10	240	16	128	2200	700	9225	9	1330	3060	60	250	175	1		
2	Amberst Island	6	240	26	136	4600	366	2800	4600	9225	9	1330	3060	940	1800	13400	2	2		
3	Grindstone Island	6	240	26	299	18200	715	265	4650	1275	6	800	1900	10	6500	1260	17900	3		
	Totals	6	240	26	445	23040	1097	3193	52930	11206	15	2130	4960	10	6500	2260	12850	26175		

MAGDALEN ISLANDS SUBDIVISION—NORTH.

1	All Right Island	3	150	20	115	2900	295	75	1875	500	10	4000	400	100	5	1000	6000	3000	1
2	Grand Entry	3	150	20	50	1500	75	25	250	200	12	4800	250	62	10	8000	12000	6000	2
3	Grosse Isle	3	150	20	50	1300	68	20	200	150	10	4000	200	50	4	1200	3500	1750	3
4	Wolf Island	3	150	20	10	250	25	5	60	50	10	4000	40	10	1	1000	1000	500	4
5	Bryon Island	3	150	20	30	680	60	20	250	150	10	4000	120	60	3	1800	3000	1500	5
	Totals	3	150	20	265	6630	523	145	2635	1050	22	8800	1010	282	23	13000	25500	12750	

SESSIONAL PAPER No. 22

RETURN showing the Kinds and Quantities of Fish and Fish Products in the County of Gaspé, Province of Quebec, for
the Year 1906.

MAGDALEN ISLANDS SUBDIVISION—SOUTH.

DISTRICTS.	KINDS OF FISH.													Seal skins, No.	Total Value of All Fish.	Number.
	Herring, salted, brls.	Herring, fresh, lb.	Herring, smoked, lb.	Mackerel, fresh, lb.	Mackerel, salted, brls.	Lobsters, preserved in cans, lb.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Halibut, lb.	Eels, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.			
<i>Gaspé County.</i>																
1 Entry Island.....	40	45000	.....	12000	.....	2640	25	.....	.....	.....	1000	100	.....	320	1,835 00	1
2 Amherst.....	1500	45000	.....	.....	.....	3270 119472	3056	10	1200	38	53466	20000	600	13822	167,721 30	2
3 Grindstone Island.....	1600	45000	.....	.....	.....	3908 94955	2762	5	1800	15	31580	20000	1000	9860	157,171 75	3
Totals.....	3140	90000	12000	7178 217067	5843	15	3000	53	86046	40100	1600	24002	326,728 05	8

MAGDALEN ISLANDS SUBDIVISION—NORTH.

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RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.—Province of Quebec—Continued.
County of Saguenay.
GODBOUT SUBDIVISION (Tadousac to Jambons).

DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						LOBSTER PLANT.								
	Vessels.			Boats.			Gill-nets.			Seines.			Trawls.		Hand-Lines.		Can-neries.		Traps.		
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	
<i>Saguenay County.</i>																					
1	Tadousac to Bersimis.....	2	30	850	4	43	860	67	53	3710	1855	.....	.....	.....	.....	.....	34	10	.....	.....
2	Pointe aux Outardes to Pointe des Monts.....	4	53	540	8	48	960	62	97	4850	2425	4	225	260	4	115	87	26	.....	.....
3	Trinity Bay to Jambons.....	3	51	825	6	85	1650	78	115	5750	2875	4	240	275	5	160	168	50	1	375	
	Total.....	9	134	2215	18	176	3470	207	265	14310	7155	8	465	535	9	275	289	86	1	375	
MOISIE SUBDIVISION (Jambons to Pigou).																					
1	St. Margarets' Bay.....	.....	.....	.....	4	30	8	7	1325	1200	1	30	40	.....	.....	.....	20	10	.....	.....
2	{ Caroussel Islands.....	.....	.....	.....	23	2300	48	38	1534	1050	2	75	90	.....	.....	.....	92	46	.....	.....
3	Moisie to Pigou.....	.....	.....	.....	30	2625	79	60	5159	11210	6	164	325	.....	.....	.....	120	60	.....	.....
	Total.....	1	17	500	6	57	4955	135	105	8018	13460	9	269	455	232	116
MINGAN SUBDIVISION (Pigou to St. Charles).																					
1	River aux Graines to Sheldrake.....	.....	.....	.....	54	3050	90	25	500	250	9	245	550	.....	.....	.....	816	408	.....	.....
2	Thunder River.....	.....	.....	.....	59	4720	117	15	300	150	11	330	825	.....	.....	.....	936	468	.....	.....
3	Dock to Jupitagan.....	.....	.....	.....	15	750	28	5	250	250	3	90	215	.....	.....	.....	234	112	.....	.....
4	Magpie.....	.....	.....	.....	30	3000	74	5	300	300	7	210	625	.....	.....	.....	592	296	.....	.....
5	St. Johns River.....	.....	.....	.....	52	4160	113	3	400	400	4	130	250	.....	.....	.....	804	401	.....	.....
6	Long Point, Mingan and Romaine.....	.....	.....	.....	27	2360	66	4	500	500	4	130	260	.....	.....	.....	528	264	.....	.....
7	Esquimaux Point to St. Charles.....	.....	.....	.....	71	10000	195	2	40	40	7	210	525	.....	.....	.....	1170	585	1	100
	Total.....	.....	.....	.....	308	28040	683	59	2290	1890	45	1345	3150	.....	.....	.....	5080	2534	1	100

SESSIONAL PAPER No. 22

RETURN showing the kinds and quantities of Fish and Fish Products in the County of Saguenay, Province of Quebec, for the
Year 1906.
GODBOUT SUBDIVISION (Tadoussac to Jambons).

FISHING DISTRICTS.		KINDS OF FISH.																	TOTAL VALUE OF ALL FISH.	Number.	
		Salmon, fresh, lb.	Herring, salted, brls.	Herring, fresh, lb.	Herring, smoked, lb.	Lobsters, preserved in cans, lb.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Halibut, lb.	Trout, lb.	Smelts, lb.	Eels, brls.	Sardines, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.			White porpoises, No.
Saguenay County.		87000	110					1800	2700	1500	11	47	190	4680	3	190	435	93	\$ cts.		
1 Tadoussac to Bersimis.																			2,139 25		
2 Pt. aux Outardes to Pt. des Mots		41000	38					3950	1700	4700	2	14	85	1087	14	85	227	4	11,027 85		
3 Trinity Bay to Jambons.		90000	128					13047	1950			9	237	1200	129		172	1	25,344 91		
Total		218000	276					18797	6350	6200	13	70	512	6967	146	275	834	98	57,772 01		
MOISIE SUBDIVISION (Jambons to Pignon).																					
1 St. Margarets' Bay.		6012	15				208	420	542				25	211	25		39		2,583 75		
2 Caroussel Islands.		20765	215				904	6	1135				40	181000	169	40000	135		84,644 30		
3 Moisie to Pignon.		166240					1435	2450	1400				39	2000	400	50	334		42,357 00		
Total		193017	230				2547	6	4005	1942			104	183211	594	40050	508		129,585 05		
MINGAN SUBDIVISION (Pignon to St. Charles).																					
1 River aux Graines to Shel- drake.		1200		1200			2155							1800	250		100		12,067 00		
2 Thunder River.		4200		13200			2171	4500						2000	250				12,937 00		
3 Dock to Jupitagan.							772							700	100				4,220 00		
4 Magpie.		10000					2488							2200	300				15,550 00		
5 St. Johns River.		2400					3319	3000						3000	450				18,950 00		
6 Long Pt. Mingan-Romaine.		14800					1542	3000						1300	250				11,735 00		
7 Esquimaux Point to St. Charles.				17700			4750							5600	600		424		27,517 00		
Total		32500		32100			17197	4500	6000					16600	2200		524		102,976 00		

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RETURN showing the kinds and quantities of Fish and Fish Products in the County of Saguenay, Province of Quebec,
for the Year 1906—Continued.
NATASHQUAN SUBDIVISION (St. Charles Island to Natashquan Point).

Number.	FISHING DISTRICTS.		KINDS OF FISH.														TOTAL VALUE OF ALL FISH.	Number.
	LOBSTER PLANT.																	
	Canneries.		Salmon, fresh, lb.	Salmon, salted, brls.	Herring, salted, brls.	Lobsters, pre- served in cans, lb.	Cod, dried, cwt.	Cod, tongues & sounds, brls.	Halibut, lb.	Trout, lb.	Eels, brls.	Fish oil, galls.	Fish as bait, brls.	Seal skins, No.				
	Value.	Number.																
<i>Saguenay County.</i>																		
1	Piashter Bay to Pashasheebow	4	1025	7200	.....	20	9600	50	.....	.....	.....	300	50	90	4,467	50	1	
2	Agwanus and Nabisippi			13200	.....	.....	2000	1000	8	1500	400	2	750	200	18	8,872	50	2
3	Mission Island .....			.....	.....	.....	.....	320	.....	.....	.....	280	150	3	2,169	00	3	
4	Natashquan			36735	.....	100	.....	2000	14	2000	500	12	2000	500	78	19,064	50	4
	Total	4	1025	57135	.....	172	11600	3370	22	3500	900	14	3330	900	186	35,173	50	

ROMAINE SUBDIVISION (Natashquan Point to Cape Whittle).

1 Kegashka	1	100	.....	23	100	960	310	.....	1000	.....	.....	260	100	20	2,918	00
2 Washeecootai .....			.....	10	.....	8112	1500	.....	400	600	.....	.....	.....	.....	2,238	00
3 Romaine	2	150	.....	8	300	528	170	3	.....	.....	4	750	75	55	2,940	25
4 Cocochoo	2	500	.....	4	90	3585	20	.....	.....	800	.....	160	5000	50	9,196	75
Total	5	750	.....	45	490	13185	500	3	1400	1400	4	670	5175	125	17,293	00

ST. AUGUSTIN SUBDIVISION (Cape Whittle to Chicatica).

1 Etamamu and St. Marys .....			.....	30	.....	.....	3500	.....	.....	.....	.....	300	300	100	1,235	00
2 Harrington .....			.....	5	220	.....	1500	.....	.....	1200	.....	3000	200	.....	19,875	00
3 Little Meecatina and Whale Head .....			.....	40	150	.....	2000	.....	.....	.....	.....	1200	950	.....	10,635	00
4 Mutton Bay .....			.....	28	50	.....	1300	.....	.....	500	.....	7000	300	50	11,557	50
5 Meecatina to Tabatière .....			.....	20	75	.....	1000	.....	.....	3000	.....	950	175	75	12,712	50
6 Fonderie à Fecteau to St. Augustin .....			.....	80	.....	.....	250	.....	.....	3000	.....	260	130	20	7,141	25
7 Point à Giroux to Chicatica .....			.....	10	10	.....	.....	.....	.....	4700	.....	14460	2755	1995	1,748	00
Total .....			.....	213	505	.....	9550	.....	.....	.....	.....	.....	.....	.....	64,904	25

RETURN showing the Number and Value of Vessels and Boats, Nets, &c., and the Quantity of Fish and Fish Products in the County of Saguenay, Province of Quebec--Continued.

BONNE ESPERANCE SUBDIVISION (Chicatica to Blancs Sablons).

DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.					
	Vessels.			Boats.			Gill-nets.		Seines.		Trap-nets.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Number.	Value.	Number.
<i>Saguenay County.</i>												
1 Chicatica to Burnt Island	1	54	1000	5	35	1360	44	10	330	3	145	285
2 Bonne Esperance	1	90	4500	6	60	3000	95	18	2000	4	450	950
3 Pigeon Island to Salmon Bay					75	4200	116	20	1030	12	960	2280
4 Little Fishery and Five League					9	550	11	4	200	2	80	200
5 Middle Bay and Belles Amours	2	104	2000	15	37	1900	74	2	100	6	400	1000
6 Bradore	5	339	10500	35	57	3075	126			5	375	850
7 Long Point and Greenly Island					75	3200	125			4	275	675
Totals	9	587	18000	61	348	17285	591	54	3660	36	2685	6240

ANTICOSTI ISLAND SUBDIVISION.

1 Fox Bay					15	150	34	1	250			
2 Bay St. Claire					10	500	20	10	400			
3 Strawberry Cove					20	750	25	10	400			
4 Shallop Cove					2	50	3	3	300			
Totals					47	1450	82	24	1350			

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RETURN showing the Quantity of Fish and Fish Products in the County of Saguenay, Province of Quebec—Continued.

BONNE ESPERANCE SUBDIVISION (Chicatica to Blancs Sablons).

DISTRICTS.	FISHING GEAR OR MATERIALS.				LOBSTER PLANT.		KINDS OF FISH AND FISH PRODUCTS.										TOTAL VALUE OF ALL FISH.	Number.
	Trawls.		Hand-lines.		Canneries.		Salmon, salted, brls.	Herring, salted, brls.	Lobsters, preserved in cans, lb.	Cod, dried, cwt.	Halibut, lb.	Trout, lb.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Seal skins, No.		
	Number.	Value.	Number.	Value.	Number.	Value.												
<i>Saguenay County.</i>																		
1	Chicatica to Burnt Island	15	60	203	63		20	6		1680		1400	44	2000	100	150	9,895 50	
2	Bonne Esperance			400	95		6			6000		400	75	5000	400		32,880 00	
3	Pidgeon Island to Salmon Bay	10	40	466	140		60			4800		1000	65	4400	250	150	27,012 50	
4	Little Fishery to Five League				15		5	6					15	1300	50	250	4,162 50	
5	Middle Bay and Belle Amour	30	120	296	104		9	47		1660		200	30	1500	75	10	9,325 00	
6	Bradore			392	129		15	54		4290		800	204	6000	400	700	25,708 00	
7	Long Point and Greenly Island	40	400	500	225		5	115		7000		200	70	9000	500	1050	40,572 50	
	Totals	95	620	2327	771		120	228		26080		4000	503	29200	1775	2310	149,056 00	

ANTICOSTI ISLAND SUBDIVISION.

1	Fox Bay.....				1	16000			61248							900	16,662 00
2	Bay St. Claire.....	40	10					10		200	1000					40	1,170 00
3	Strawberry Cove.....	40	10					20		350	2000					50	2,037 50
4	Shallop Creek.....						28										420 00
	Totals.....	80	20		1	16000	28	30	61248	550	3000			275		990	20,289 50

RECAPITULATION

Showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials in Gulf Division, Province of Quebec, for the Year 1906.

BONAVENTURE COUNTY.

SUBDIVISIONS.	FISHING VESSELS AND BOATS.							FISHING GEAR OR MATERIALS.										Number.				
	Vessels.				Boats.			Gill-nets.		Seines.		Trap-nets.		Trawls.		Wiers.			Smelt-nets.		Hand-lines.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.		Number.	Value.	Number.	Value.
1 Restigouche.	8	470	10000	40	1345	400	33	20	5000	4500									30	1500	1305	
2 Bonaventure.								3804	75400	42200	133	3940	68	600					3	180	2610	
3 Port Daniel.					486	17190	812	1058	22875	17745	89	2225	375	6300							4620	
Totals	8	470	10000	40	1851	30190	2165	4874	103275	66445	222	6165	443	6900					33	1680	7230	2840

GASPÉ COUNTY.

SUBDIVISIONS.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.										Number.				
	Vessels.			Boats.			Gill-nets.		Seines.		Trap-nets.		Trawls.		Wiers.			Smelt-nets.			
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.		Number.	Value.	Number.	
1 Grand River.	...	...	...	...	480	19978	1271	1181	25885	12845	17	615	...	...	...	...	...	...	...	2769	1384
2 Gaspé Bay.	...	...	...	...	808	43135	1472	1474	25225	23816	53	2985	...	...	...	...	...	...	...	4388	1766
3 Mont Louis.	...	...	...	...	380	10720	600	1040	30600	19300	5	170	...	...	...	...	...	...	...	1194	1191
4 Ste. Anne des Monts.	...	...	...	...	163	2894	240	239	5432	3715	...	...	...	...	...	...	...	...	...	424	424
5 Magdalen Islands, South	6	240	2200	26	445	23040	1097	3193	52930	11200	15	2130	...	...	...	...	...	...	...	2660	615
6 " " North	3	150	2500	20	265	6630	523	145	2635	1050	...	...	...	...	...	...	...	...	...	1010	282
Totals	9	390	4700	46	2541	106397	5203	7272	142710	71927	90	5900	8330	12045	5670

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SAGUENAY COUNTY.

1	9	134	2215	18	176	3470	207	265	14310	7155	8	465	535	9	275	22	660	3	225	289	1	
Godbout.....	1	17	500	6	57	4955	135	105	8018	13460	9	269	435	.....	.....	.....	.....	.....	.....	232	86
2 Moisie.....	.....	.....	.....	.....	308	28040	683	59	2290	1890	45	1345	3150	3	900	.....	.....	.....	.....	5080	116
3 Mingan.....	.....	.....	.....	.....	80	9075	213	50	8650	4265	15	850	1260	.....	.....	.....	.....	.....	.....	839	2534
4 Natashquan.....	2	59	1450	23	44	1810	48	46	1340	877	5	275	370	2	450	.....	.....	.....	.....	172	395
5 Romane.....	.....	.....	.....	.....	304	6030	462	91	8550	6350	31	1980	1750	35	12300	.....	.....	.....	.....	1690	86
6 St. Augustin.....	.....	.....	.....	.....	348	17285	591	54	3660	2620	36	2685	6240	122	47600	95	620	.....	.....	2327	566
7 Bonne Esperance.....	9	587	18000	61	47	1450	82	24	1350	760	.....	.....	.....	6	1700	.....	.....	.....	.....	771	7
8 Anticosti Island.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	80	8
Totals.....	21	797	22165	108	1304	72115	2421	694	48168	37377	149	7869	13760	168	62950	104	895	22	660	194	7830	10709	4574

GRAND TOTAL OF GULF DIVISION.

1	Bonaventure County	8	470	10000	40	1851	30190	2165	4874	103275	66445	222	6165	6715	.....	443	6900	.....	33	1680	7230	1		
2	Gaspé County	9	390	4700	46	2541	106397	5203	7272	142710	71927	90	5900	8330	32	15300	193	2982	.....	19	1900	12045	2	
3	Saguenay County	21	797	22165	108	1304	72115	2421	694	48168	37377	149	7869	13760	168	62950	104	895	22	660	194	7830	10709	3
	Grand totals	38	1657	36865	194	5696	208702	9789	12840	294153	175749	461	19934	28805	200	78250	740	10777	22	660	246	11410	29984	13084

RECAPITULATION
Showing the Quantity and Value of all Fishing Materials and Kinds of Fish in the Gulf Division, Province of Quebec,
for the Year 1906—Continued.
BONAVENTURE COUNTY.

SUBDIVISIONS.	LOBSTER PLANT.				Persons employed in canneries.	OTHER FIXTURES USED IN FISHERIES.				KINDS OF FISH.											
	Canneries.		Traps.			Freezers and Ice Houses.	Smoke and Fish Houses.		Piers and Wharfs.		Tugs, Steamers and Smacks.	KINDS OF FISH.									
	Number.	Value.	Number.	Value.			Number.	Value.	Number.	Value.		Salmon, fresh, lb.	Salmon, salted, brls.	Herring, salted, brls.	Herring, fresh, lb.	Herring, smoked, lb.	Mackerel, fresh, lb.	Mackerel, salted, brls.			
1 Restigouche.....	4	1100	2720	1875	22	35	6405	336	54175	2	30000	1	450	75409	150	2239	1450	36000	48000	23700	71700
2 Bonaventure.....	11	3250	11000	5800	236	15	1500	182	4925					122000	122000	1450					
3 Port Daniel.....														28500							
Totals.....	15	4350	13720	7675	258	50	7905	518	59100	2	30000	1	450	225909	3830			36000			

GASPÉ COUNTY.																					
1 Grand River.....	8	2200	3500	1750	120	8	1050	123	54200	7	2050	1		84457		1033		8000			
2 Gaspé Bay.....	4	3700	4000	4190	86	5	1400	195	54300	19	7700	2		105277		1070					
3 Mont Louis.....	1	300				11	3200	17	3700	2	1000			26006		1085					
4 Ste. Anne des Monts.....														13100		2049					
5 Magdalen Islands, South.....	15	12850	36150	26175	458	12	2550	50	17000	10	6000	4		3140		3140		90000		12000	7178
6 " " North.....	23	13000	25500	12750	410			26	9250	15	5050	5				1130		30000		56000	
Totals.....	51	32050	65150	44865	1074	36	8200	411	138450	53	21800			228834		9507		38000		12000	7178

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SAGUENAY COUNTY.

1	Godbout.	1	375	65	38	5	45	900	2	55	2	300	2	1750	218000	276	1600	1
2	Moisie.	1	100	200	200	4	1	500	30	6500	2	300	1	20000	193017	230	1600	2
3	Mingan.	4	1025	700	700	19	1	400	85	18400	12	2100	1	32600	32100	32100	1600	3
4	Natashquan.	5	750	1300	700	29	1	200	127	9240	30	1450	1	57135	57135	172	1600	4
5	Roumaine.	1	100	200	200	4	1	500	18	600	7	275	1	45	45	490	1600	5
6	St. Augustin.	1	16000	4500	1400	34	1	200	110	2950	95	4225	3	9000	213	505	1600	6
7	Bonne Esperance.	1	16000	4500	1400	34	1	200	68	16250	70	8765	2	7000	120	228	1600	7
8	Anticosti Island.	1	16000	4500	1400	34	1	200	1	100	100	8765	2	7000	28	30	1600	8
	Totals.	12	18250	6765	3038	91	48	2000	441	54095	218	17415	8	37750	500752	1931	1600	

GRAND TOTAL OF GULF DIVISION.

1	Bonaventure County.	15	4350	13720	7675	258	50	7905	518	59100	2	30000	1	450	225009	3830	71700	1
2	Gaspé County.	51	32050	69150	44865	1074	36	8200	411	138450	53	21800	8	87750	228834	9507	35000	2
3	Saguenay County.	12	18250	6765	3038	91	48	2000	441	54095	218	17415	8	37750	500752	1931	1600	3
	Grand totals.	78	54650	89635	55578	1423	134	18105	1370	251645	273	69215	9	38200	955495	15268	12000	

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SAGUENAY COUNTY.

	1	2	3	4	5	6	7	8
1 Godbout.....	1824	1100	5	18797	6350	6200	13	70
2 Moisie.....		2547	6	4005	1942			
3 Mingan.....	1920	17197		4500	6000			
4 Natashquan.....	11600	3370	22	3500	900		14	
5 Romane.....	13185	500	3	1400	1400		4	
6 St. Augustin.....		9550			4700			
7 Bonne Esperance.....		26080			4000			
8 Anticosti Island.....	61248	550		3000				
Totals.....	89777	60894	36	35202	25292	6200	31	70

GRAND TOTAL OF GULF DIVISION.

	1	2	3
1 Bonaventure County.....	54624	85	22895
2 Gaspé County.....	654399	94696	73
3 Saguenay County.....	89777	60894	36
Grand totals.....	798860	85	178485

	1	2	3
1 Bonaventure County.....	277,172 55	...	...
2 Gaspé County.....	1,076,505 40	26907	...
3 Saguenay County.....	577,049 31	6482	98
Grand totals.....	1,930,727 26	33389	98

7-8 EDWARD VII., A. 1908

RECAPITULATION.

STATEMENT showing Yield and Value of Fisheries in Gulf Division, Province of Quebec, for the Season of 1906.

Description.	Quantity.	Price.		Value.
		\$	cts.	\$ cts.
Salmon, fresh in ice..... Lb.	954,495	0	20	191,099 00
" salted..... Brls.	406	15	00	6,090 00
Herring, "..... " 15,268	15,268	5	00	76,340 00
" fresh..... Lb.	214,100	0	01	2,141 00
" smoked..... "	111,300	0	02	2,226 00
Mackerel, fresh..... "	12,000	0	12	1,440 00
" salted..... Brls.	7,178	15	00	107,670 00
Lobsters, canned..... Lb.	798,800	0	25	199,700 00
" fresh in shell..... Cwt.	85	5	00	425 00
Cod, dried..... "	178,485	5	00	892,425 00
Cod tongues and sounds..... Brls.	195	10	00	1,950 00
Haddock, fresh..... Lb.	39,610	0	03	1,188 30
" dried..... Cwt.	2,635	3	00	7,905 00
Hake, "..... "	537	2	25	1,208 25
Halibut..... Lb.	151,162	0	03	9,534 86
Trout..... "	67,742	0	10	6,774 20
Smelt, in ice..... "	203,196	0	05	10,159 80
Eels, cured..... Brls.	232	10	00	2,320 00
Sardines, cured..... "	70	3	00	210 00
Tom cod..... Lb.	51,000	0	03	1,530 00
Coarse and mixed fish..... Brls.	1,119	2	00	2,238 00
Fish and whale oil..... Galls.	416,832	0	30	125,049 60
Fish as bait..... Brls.	117,485	1	50	176,227 50
Fish as manure and fertilizer..... "	135,495	0	50	67,747 50
Seal skins..... No.	33,389	1	25	41,736 25
White whale skins..... "	98	4	00	392 00
Total value, 1906.....				1,930,727 26
" 1905.....				1,750,514 50
Increase.....				180,212 76

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RECAPITULATION

Showing Number of Men, Vessels and Boats, and Value of material employed in Gulf
Division Fisheries for Season of 1906.

Description.	Value.
	\$ cts.
38 vessels of 1,657 tons, manned by 194 men.. . . .	36,865 00
5,696 fishing boats, fished by 9,789 men	208,702 00
294,153 fathoms of gill net.	175,749 00
19,934 " seines	28,805 00
200 trap-nets for herring and cod.	78,250 00
740 trawls.	10,777 00
22 weirs.	660 00
246 smelt and seal nets	11,410 00
29,984 hand lines and sinkers.	13,084 00
78 canneries for lobsters	54,650 00
89,635 lobster traps	53,578 00
134 freezers and ice houses.	18,105 00
1,370 smoke and fish houses.	251,645 00
273 private piers, wharfs and stages.	69,215 00
9 tugs and smacks.	38,200 00
Total.	1,051,695 00

RETURN of the number of Fishermen, Value of Boats, Nets, &c., and the Kinds and
Lévis, both inclusive, Province

Number.	DISTRICTS.	FISHING MATERIALS.						KINDS						
		Boats.			Gill Nets.			Brush or Eel Weirs.		Salmon, fresh, lb.	Herring, salted, brls.	Herring, fresh, lb.	Herring, smoked, lb.	Cod, dried and green, lb.
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.					
1	Capucins	20	170	30	16	400	200	1	20	2900	25	1000	...	62000
2	Petit & Grand Mechins...	70	1250	102	93	2410	1100				350	3200	...	251000
3	Grosses Roches	20	200	35	25	600	300				100	1500	...	61500
4	Ste. Felicité	25	275	60	30	750	500	2	50		600	2500	...	72000
5	Matane	25	300	40	20	500	400	14	600	11250	400	5000	2500	61200
6	Rivière Blanche	26	420	36	38	800	350				375	4600	3000	55000
7	Sandy Bay	60	700	50	190	3040	1050	2	60		1300	10000	4000	60000
8	Metis and vicinity	18	450	20	8	200	140	6	180	5500	80	...	...	12000
9	Ste. Flavie and Ste. Luce.	24	300	37	39	980	475	9	630	3000	360	12000	...	5000
10	Rimouski & Inland Lakes.	4	20	25				24	2250	2120	385	10800	...	
11	Bic	1	5	5				5	500	300	75	4000	...	
12	St. Fabien and St. Simon.	1	5	5				4	300	1230	70	4400	...	
13	Trois Pistoles	1	10	13				7	500	980	70	632000	...	
14	Isle Verte and vicinity ..	32	350	60				34	2100	3800	400	896000	66800	...
15	Cacouna	23	200	32				21	2140	8170	153	32200	43350	...
16	Lake Temiscouata and tri- butaries			20	35	700	200							
17	Riv. du Loup and N. D. du Portage	8	70	24	11	440	110	18	990	600	10	32000	...	
18	St. André	2	30	26				12	1500	35	45	208000	4800	...
19	Kamouraska			10				5	1000	90	6	6400	200	...
20	St. Denis			14				9	400	1600	16	44000	120	...
21	River Ouelle			24				18	2150	1000	20	19200	...	
22	St. Anne de la P.			10				8	500					
23	St. Roch			7				7	450					
24	St. Jean Port Joli			12				11	450					
25	L'Islet and Cap St. Ignace			17	1	80	25	23	2100					
26	Crane and Grosse Islands.			5	3	300	125	3	500					
27	St. Thomas	3	40	5	5	320	60	4	850					
28	Berthier	8	140	26	13	500	180	23	5580	120				
29	St. Valier	8	75	8				4	7600	350				
30	St. Michel	14	150	14				9	4200	280				
31	Beaumont	18	255	18				8	8250	600				
32	St. Joseph and Levis	14	130	14				8	6800	300				
33	St. Romuald and New Liverpool	3	60	3				2	500					
34	St. Nicholas	10	120	10				7	3000	250				
Totals		438	3725	817	527	12020	5215	208	56500	44475	4840	1919800	123770	639700
Values			\$							6671	21780	19198	2475	31985

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Continued.

Value of all Fish in the South Shore District extending from County Rimouski to of Quebec, for the Year 1906.

OF FISH AND FISH PRODUCTS.

Halibut, lb.	Trout, lb.	Shad, lb.	Smelts, lb.	Whitefish, lb.	Bass, lb.	Pickered, lb.	Eels, lb.	Sardines, brls.	Sturgeon, lb.	Coarse and Mixed Fish, lb.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.	Clams, brls.	Beluga skins, No.	Value.	Number.	
																	\$ cts.		
5000											40	8					3,696 50	1	
1700	450										480	92	150		60		15,199 00	2	
500											275	65	50				3,770 00	3	
1750											200	70					6,577 50	4	
2800	250							75			150	50	60				7,187 50	5	
2000											195	30	35				4,764 50	6	
3500											200	35	80				9,357 50	7	
5000											50	22	250				2,208 00	8	
1250											15	12	1900				3,475 00	9	
2200	15000							30					100				3,908 50	10	
													275				560 00	11	
			1500				100	105	180	9800			30				558 50	12	
		4700	6000				500	525	1160	148400	450		6680			9	7,506 80	13	
		1600					5000	760	520	20800	13		936	9			19,917 60	14	
	2200			2000													6,391 35	15	
																	420 00	16	
		25					10350	120	100	5200	15		234	6			1,624 50	17	
							7730	380	1350	2000	15						4,093 05	18	
		1030						480	5000	4000	90		180				2,067 30	19	
		2000					7900	400	200	1600	10		80	5			2,625 65	20	
		600					50700	236		3600	440		160			33	4,598 00	21	
	5450						14050										1,388 00	22	
							17900			960			45				1,106 10	23	
	3300						12400										1,074 00	24	
							2560		5500	620			30				504 80	25	
					600		10320				65			20			723 70	26	
				50	1500	200	2909		26400	3000							1,963 00	27	
		400		8700	225	100	11350		37900	1650	36			2		1	3,933 30	28	
		1300		750	900	250	5400		6350	4400	12			3			1,076 85	29	
		945		1010	850	400	28800		1375	1300	15						2,152 70	30	
		4800		10700	1300	620	31000		4080	6700							3,811 80	31	
	800	2000		850	550	300	52400		1000	6300							3,682 00	32	
				100	110	200	3600			2100							278 00	33	
		4500		1800	640	1800	10250		5400	7200							1,742 50	34	
25700	27450	23900	7500	25960	6675	3870	285210	3111	96515	229630	2766	384	11715	45	160	43	.....	
1285	2745	1434	375	2596	668	387	17113	9333	5791	2296	830	576	5858	56	320	172	133,943 50		

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all Kinds of Fish caught in the inland District from Quebec to Pontiac, in the for the Year 1906.

KINDS OF FISH.												VALUE.		Number.
Whitefish, lb.	Trout, lb.	Bass, lb.	Pickarel, lb.	Pike, lb.	Maskinonge, lb.	Sturgeon, lb.	Eels, lb.	Perch, lb.	Catfish, lb.	Mixed and coarse fish, lb.	Bullheads, lb.	\$	cts.	
7,400	49,200	10,300	19,600	47,600	1,500	18,500	8,700	7,300	7,500	115,500	8,000	17,267	00	1
.....	2,000	1,600	2,000	1,900	600	1,700	5,000	8,000	3,000	7,000	6,000	2,117	00	2
.....	.....	400	600	500	100	400	1,500	1,000	1,000	1,200	800	*405	00	3
.....	10,000	500	2,000	1,000	150	900	2,000	1,000	500	5,000	1,000	1,808	00	4
300	5,000	200	1,000	2,200	200	1,000	1,200	4,200	1,500	20,000	4,000	2,027	00	5
.....	.....	200	600	2,000	150	900	4,200	4,000	2,200	16,000	3,000	1,397	00	6
1,000	2,200	500	1,000	2,000	300	1,000	3,100	3,000	2,000	6,000	2,500	*3,012	20	7
.....
1,100	.....	1,100	2,500	5,800	250	1,900	12,000	1,300	2,200	52,300	3,100	3,642	00	8
.....	.....	800	3,000	1,200	400	1,000	11,100	2,400	800	65,500	1,100	3,360	00	9
300	.....	300	1,000	2,000	200	600	6,000	3,000	600	10,000	1,000	1,236	00	10
.....	.....	4,200	3,000	24,000	.....	250	86,000	34,300	.....	111,700	37,200	14,021	00	11
250	.....	200	600	950	200	650	1,500	1,200	300	10,000	800	710	50	12
500	.....	200	600	1,000	100	700	1,000	1,100	900	40,000	900	1,647	80	13
.....	.....	1,000	500	450	150	300	600	1,000	500	5,000	700	521	50	14
.....	.....	2,100	1,200	1,100	400	1,800	5,800	11,000	2,300	15,500	6,600	2,277	00	15
.....	.....	2,000	1,500	1,000	400	5,000	40,000	2,000	2,000	1,000	1,000	3,380	00	16
7,900	.....	.....	34,400	5,500	.....	.....	.....	51,700	.....	32,000	8,200	8,460	00	17
7,800	17,700	7,200	10,200	6,500	.....	.....	2,000	10,500	.....	14,400	.....	5,692	00	18
26,550	86,100	32,800	85,300	106,700	5,100	36,600	191,400	148,000	27,300	528,100	85,900	.....	.....	.....
2,655	8,610	3,280	8,530	5,335	510	2,196	11,484	7,400	819	15,843	4,295	72,991	00	.....

* In No. 7, add 50,000 lb. Tom-cod—\$1,500 and 160 lb. Salmon, \$24.

STATEMENT.

NORTH SHORE of the St. Lawrence from **Quebec** to the **Saguenay**, including Lake St. John District, 1906.

Fishing Materials and Kinds of Fish.	Counties of Quebec and Mont- morency, with Isle d'Orleans.	Charlevoix and Isle aux Coudres.	Lake St. John and Tributaries, including Saguenay River.	Total Quantity.	Total Value.
<i>Materials.</i>					
Boats..... No.	15	16	8	39	283
Weirs..... No.	123	46	.....	169	11,620
Gill nets..... Fathoms	350	330	600	1,280	252
Lines..... No.	45	41	40	126	105
Total value.....	.....	.....	.....	.....	12,260
<i>Kinds of Fish.</i>					
Salmon..... Lbs.	1,400	3,900	47,000	52,300	7,845
Herring..... "	.....	4,200	.....	4,200	42
Whitefish..... "	2,000	.....	5,000	7,000	700
Trout..... "	7,400	14,600	16,300	38,300	3,830
Ouananiche..... "	.....	.....	9,450	9,450	945
Pickarel..... "	800	.....	23,000	23,800	2,380
Pike..... "	.....	.....	4,500	4,500	225
Perch..... "	200	.....	700	900	45
Eels..... "	251,400	56,500	.....	307,900	18,474
Mixed fish..... "	26,600	154,600	28,300	209,500	2,095
Sardines..... Brls.	70	125	.....	195	585
Beluga skins..... No.	52	52	208
Total lbs.....	303,800	258,800	134,250	690,850
Values..... \$	16,800	7,398	13,176	37,374

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RECAPITULATION

SHOWING the Yield and Value of the Fisheries of the Province of **Quebec**,
(exclusive of the Gulf Division), for the Year 1906.

Kinds of Fish.	Quantity.	Price.		Value.	
		\$	cts.	\$	cts.
Cod, green.....	Lb.	639,700	0.05	31,985	00
Halibut.....	"	25,700	0.05	1,285	00
Salmon.....	"	96,935	0.15	14,540	25
Ouananiche.....	"	9,450	0.10	945	00
Trout.....	"	151,850	0.10	15,185	00
Whitefish.....	"	59,510	0.10	5,951	00
Herring, salted.....	Brls.	4,840	4.50	21,780	00
" fresh.....	Lb.	1,924,000	0.01	19,240	00
" smoked.....	"	123,770	0.02	2,475	40
Sardines.....	Brls.	3,306	3.00	9,918	00
Shad.....	Lb.	32,400	0.06	1,944	00
Eels.....	"	784,510	0.06	47,070	60
Maskinongé.....	"	5,100	0.10	510	00
Bass (sea).....	"	6,675	0.10	667	50
" (Achigan).....	"	32,800	0.10	3,280	00
Pickarel (Doré).....	"	112,970	0.10	11,297	00
Pike.....	"	111,200	0.05	5,560	00
Perch.....	"	148,900	0.05	7,445	00
Sturgeon.....	"	133,115	0.06	7,986	90
Tom-cod.....	"	50,000	0.03	1,500	00
Smelts.....	"	7,500	0.05	375	00
Bull-heads, dressed.....	"	85,900	0.05	4,295	00
Catfish.....	"	27,300	0.03	819	00
Coarse fish.....	"	967,230	.....	20,234	30
Clams.....	Brls.	160	2.00	320	00
Fish as bait.....	"	384	1.50	576	00
" as fertilizer.....	"	11,715	0.50	5,857	50
" oil.....	Galls.	2,766	0.30	829	80
Hair seal skins.....	No.	45	1.25	56	25
Belugas (white whales) skins.....	"	95	4.00	380	00
Total for 1906.....				244,308	50
" for 1905.....				253,201	80
Decrease.....				8,893	30

RECAPITULATION

SHOWING the Fishing Materials in the above Districts, 1906, (exclusive of the Gulf Division.)

Articles.	Value.	
	\$	cts.
1,337 fishing boats (1,910 men).....	13,823	00
17,290 fathoms of gill-nets.....	5,492	00
1,566 " seines.....	155	00
377 weirs, (brush or wire).....	68,120	00
2 large weirs (special for eels).....	60,000	00
1,340 hoop-nets.....	6,700	00
night lines and dhand lines.....	1,350	00
21 fish houses or ice houses.....	180	00
Total.....	155,820	00

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RECAPITULATION

Of the Fisheries product of the whole Province of Quebec, for the Year 1906.

Kinds of Fish.	Quantity.	Price.	Value.	Total Value.
		\$ cts.	\$ cts.	\$ cts.
Salmon fresh.....Lb.	1,051,430		205,639 25	
" salted.....Brls.	406	15 00	6,090 00	
				211,729 25
Ouananiche.....Lb.	9,450	0 10		945 00
Trout....."	219,592	0 10		21,959 20
Whitefish....."	59,510	0 10		5,951 00
Smelts....."	210,696	0 05		10,534 80
Cod, dried.....Cwt.	178,483	5 00	892,425 00	
" green.....Lb.	639,700	0 05	31,985 00	
" tongues and sounds.....Brl.	195	10 00	1,950 00	
				926,360 00
Haddock dried.....Cwt.	2,635	3 00	7,905 00	
" fresh.....Lb.	39,610	0 03	1,188 30	
				9,093 30
Hake, dried.....Cwt.	537	2 25		1,208 25
Halibut.....Lb.	176,862			5,819 86
Tom-cod....."	101,000	0 03		3,030 00
Herring, fresh....."	2,138,100	0 01	21,381 00	
" smoked....."	235,070	0 02	4,701 40	
" salted.....Brls.	20,108		98,120 00	
				124,202 40
Sardines....."	3,376	3 00		10,128 00
Shad.....Lb.	32,400	0 06		1,944 00
Mackerel, fresh....."	12,000	0 12	1,440 00	
" salted.....Brls.	7,178	15 00	107,670 00	
				109,110 00
Bass, (sea).....Lb.	6,675	0 10		667 00
" (Achigan)....."	32,800	0 10		3,280 00
Pickarel....."	112,970	0 10		11,297 00
Perch....."	148,900	0 05		7,445 00
Pike....."	111,200	0 05		5,560 00
Maskinonge....."	5,100	0 10		510 00
Eels, fresh....."	784,510	0 06	47,070 60	
" cured.....Brls.	232	10 00	2,320 00	
				49,390 60
Sturgeon.....Lb.	133,115	0 06		7,986 90
Lobster in cans....."	798,800	0 25	199,700 00	
" fresh in shell.....Cwt.	85	5 00	425 00	
				200,125 00
Clams.....Brls.	160	2 00		320 00
Bullheads, dressed.....Lb.	85,900	0 05		4,295 00
Catfish....."	27,300	0 03		819 00
Coarse fish....."	1,191,030			22,472 30
Fish as bait.....Brls.	117,869	1 50		176,803 50
" as fertilizer....."	147,210	0 50		73 605 00
" oil.....Gall.	419,598	0 30		125,879 40
Hair seal skins.....No.	33,434	1 25		41,792 50
White whale skins....."	193	4 00		772 00
Total for 1906.....				2,175,035 76
" 1905.....				2,003,716 30
Increase.....				171,319 46

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RECAPITULATION

Of the Capital invested in Vessels, Boats, Nets, &c., in the Fisheries of all Quebec,
for the Year 1906.

Articles.	Value.	Total.
	\$	\$ cts.
38 fishing vessels (1,657 tons).....	36,865	
7,033 " boats.....	222,525	259,390 00
311,443 fathoms of gill-nets.....	181,241	
21,500 " seines.....	28,960	
200 trap-nets for herring and cod.....	78,250	
740 trawls.....	10,777	
399 weirs.....	68,780	
2 large eel-weirs.....	60,000	
1,340 hoop-nets.....	6,700	
246 smelt-nets and seal-nets.....	11,410	
..... hand lines and night lines.....	14,434	460,552 00
78 lobster canneries.....	54,650	
89,635 " traps.....	55,578	110,228 00
155 freezers and ice houses.....	18,285	
1,370 smoke and fish houses.....	251,645	
273 private piers, wharfs and stages.....	69,215	
9 tugs and fishing smacks.....	38,200	377,345 00
Total.....		1 207,515 00

STATEMENT of the persons engaged in the Quebec Fisheries, 1906.

Number of men in fishing vessels.....	194
" " " boats.....	11,699
" persons in lobster canneries.....	1,423
Total	13,316

APPENDIX No. 6.

ONTARIO.

GENERAL REMARKS, FISHERY SEASON 1906.

The following statements are taken from the Provincial Report of Ontario :

RAINY RIVER.

That portion of the province little known to those living in the eastern part is from Kenora across the southern boundary of the Lake of the Woods to the Rainy River. The sail of eighty miles down this noble stream to the thriving town of Fort Francis is one of the most enjoyable that can be taken in Canadian waters. Fort Francis is the gateway to the Rainy River district, where fresh water fishing of nearly every kind is excellent.

Re-stocking was carried on as in former years, but not to the extent that the department would have liked, owing to the lateness of the parent bass coming into waters where they could be taken, and afterwards the weather turned so hot that the difficulty of handling them without much loss was great. Your consideration of securing breeding ponds is again asked. If for instance, during the past summer when it was possible to secure the bass in large quantities, they could have been deposited in some small lakes or ponds on our principal railways at a reasonable distance from the breeding grounds, to be finally deposited in the waters the department thought suitable, and at a time when it was thought best for the interests of the public, they could be handled with less loss. In the autumn, fingerlings can be secured in large quantities, but owing to the shortness of the days and the cool weather often experienced at night, carrying them to any distance is found to be somewhat difficult ; but if they could be placed until the following spring in breeding ponds, they could be handled much more easily. There is another drawback in taking them to their destination in the autumn. As soon as the tourists leave for home, the navigation companies put a great many of their boats out of commission, so sometimes much delay is caused in taking them from the train to the boat.

NEPIGON.

Nepigon, the famous stream for speckled trout, has this year seen more tourists than in any former year. The fishing has been reported excellent, and no stronger recommendation can be given than that summer after summer the same ardent fishermen journey many miles to whip the stream that has no rival in trout fishing. The reputation of this stream has extended much further than this continent, and many a well known name, famous abroad, will be seen among those who have purchased angling permits. One well known merchant of Capetown visits Canada periodically with the express object of enjoying the trout fishing on the Nepigon.

TEMAGAMI.

Temagami, a few years ago, was unknown to a vast majority of Canadians, but every summer more and more seem to find out this most charming summer resort where the fishing is reported excellent : and these waters, if carefully watched over, will never

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require to be re-stocked. The patrol boat did splendid service during the past summer, and no complaints have reached the department of any illegal fishing. If the increase of visitors last summer was any indication of what we may yearly expect, it may be necessary in the near future to purchase a boat to be used exclusively for patrol purposes on these waters.

SUPPLYING THE HOME MARKET.

Referring to this matter in the Report for 1905, the then Deputy Commissioner of Fisheries did so as follows: 'The circular letter which in 1904 was addressed to every licensed fisherman in the province notifying him that he must make arrangements for supplying the local demand for fish does not appear to have received that attention which was hoped and expected.' This is a question of dollars and cents, and not of patriotism and sentiment. It rests with the public and not with the fishermen to establish a home market, which can only be accomplished in two ways, namely, by the Dominion Government prohibiting export, or residents of the province being prepared to pay the price for Ontario fish they realize in the United States. The public fail to recognize the changed conditions from those prevailing fifteen years ago. At that time the fresh water fisheries of the United States had not been depleted, neither was the fishing business of Ontario controlled by powerful American combines. Not many years back, fishermen on the shores of Lake Erie were satisfied to sell herring at one cent per pound, and whitefish and salmon trout at five cents a pound—the price now realized in many markets for the much abused carp. However desirable it may be to have our home markets abundantly supplied with good wholesome fish, this will not occur under present conditions, but our fish will reach those markets paying the most for them.

POLLUTIONS.

This is becoming a serious matter on streams and other public waters, on the banks and shores of which are located so many of the manufacturing establishments of the province. Unfortunately, many of the municipalities who suffer most from the pollution of public waters are to a large extent unable to have such nuisances abolished. When complaints are made, the authorities are held up, the factory or mill owners threatening to remove their establishments unless allowed to pollute the rivers and streams with impunity, as in 1905, when the department had trouble on the Grand river near Berlin. It is of little use re-stocking waters with black bass at great expense, and have them destroyed by hundreds with deleterious matter from sugar or other factories. Having been informed that hundreds of dead bass and other fish lay on the shores of the Grand river near a sugar factory, and were a menace to the health of the public, I at once sent a member of the staff to investigate. The reeve had the dead fish buried. Samples of the refuse water from the factory were taken, and analysis proved it to be most destructive. Unless the municipal authorities will undertake to assist the department in protecting the rivers and streams re-stocked by the department, the municipalities should be allowed to do the re-stocking and pay for it.

CARP.

The numerous members of this family are fresh water fish, confined to the Old World and North America, being quite unknown in the southern half of the New World, and also in Australia, showing much less diversity of form and habits than the catfish. The carp tribe are for the most part omnivorous, although some of the members of this extensive and varied family restrict themselves to a vegetable diet. Although some of them prefer muddy situations, where their barbels are probably of assistance, the majority of the carp differ from the catfish in selecting clear water for their haunts. On account of their more cleanly feeding habits, the flesh of the carp is

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superior and more healthy food than the flesh of the catfish taken from their dirty surroundings, preferring still waters with a soft muddy bottom, in which it grovels with its snout for food. The carp feeds on various vegetable substances, as well as on insects and other small aquatic invertebrates. In many of the waters of the United States and Canada, the carp has taken kindly to its new habitat, not unfrequently attaining as much as a yard in length with a weight of 25 lbs., while very much larger specimens are on record. When the surface of their haunts is locked in ice, carp lie deeply buried in holes in the mud, consorting in numbers, and undergoing a partial hibernation, which is not broken until the returning warmth of spring. Their growth is extremely rapid, and their fecundity extraordinary, nearly three-quarters of a million eggs having been counted in the roe of a medium-sized specimen. They will live a long time out of water, if moistened from time to time, and are known to live to a great age. No doubt the carp has a place and is here for a beneficial purpose in nature's great and perfect plan, same as all other creations. Evidently that place is to supply the increasing millions of inhabitants of this vast continent with an abundance of cheap wholesome food. No person fifty years ago would have believed that the repulsive looking catfish would ever become a feature in the food and commercial fish business. The carp is evidently here to stay—a striking illustration of Darwinism. The time is not far distant when carp will not be considered as now, a nuisance. To in some measure reduce the present tendency to deplete the waters of our great lakes of the most valuable species of fish, it is imperative that the immense supply of carp available should be utilized, then there would be no difficulty in keeping them in reasonable bounds. Any man or men who will succeed in devising some method of curing, drying or salting carp so as to cause them to become a factor in commerce will be public benefactors and entitled to the thanks of posterity.

STATISTICS FOR ONTARIO

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ARIO.

Boats and Nets, &c., and Fish caught during the Year of 1906.

KINDS OF FISH.												Value.	Number.
Herring, fresh, lb.	Whitefish, lb.	Trout, lb.	Pickarel or Doré, lb.	Pike, lb.	Sturgeon, lb.	Tullibee, lb.	Catfish, lb.	Mixed and coarse fish, lb.	Caviare, lb.	Sturgeon bladders, No.	Trout, salted, brls.	Whitefish, salted, brls.	
												\$ cts.	
	165200	34600	92700	58100	50900	500	75200		2850	100			43,767 1
	50100		30300	20000									8,840 2
	3800	4600	23000	4700									3,328 3
	4700	6300	1500	900									1,286 4
	19500	19000	9800	7800		4000							5,382 5
	41700	7400	45100	11700									9,888 6
							3600						288 7
	43000	26100	27200	10600		400	4100						10,406 8
	60200	2100	15000		3100				200				8,118 9
	388200	100100	244600	113800	54000	4900	82900		3050	100			
	38820	10010	24460	4552	4320	294	6632		2135	80			91,303
176800	274900	1058750	19250	300				2500			691	158	152,707 1
400	4800	64300									8		7,010 2
18800	20800	12500											4,270 3
	6600	13400											2,000 4
	33100	317700				3900					209		37,404 5
	33700	191200				2200					153		24,152 6
	14100	10100		2000				6500			70		3,395 7
	19100	39800			300						7		5,984 8
	8500	18200											2,670 9
500	5100	17200											2,255 10
196500	420700	1743150	19250	2300	300	6100		9000			1138	158	
9825	42070	174315	1925	92	24	366		270			11380	1580	241,847

7-8 EDWARD VII., A. 1908

ONT

RETURN of the Number, Tonnage and Value of Tugs, Vessels and Boats, and the
Province of Ontario,

Number.	DISTRICTS.	FISHING MATERIAL.										
		Tugs or vessels.				Boats.			Gill-nets.		Pound-nets	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Yards.	Value.	Number.	Value.
	<i>Lake Huron (North Channel).</i>			\$		\$		\$		\$		\$
1	Thessalon.					3	450	6			10	2200
2	St. Joseph Island					8	750	11	35000	1400	2	400
3	Bruce Mines.					3	400	6	12000	400	5	1000
4	Mississauga.	1	35	3500	6						6	1200
5	Blind River	1	15	2000	6	1	450	2			10	2000
6	Fraser's Bay	1	20	3500		2	200	4			5	1000
7	Haywood Island.	1	4	700	6						5	1000
8	Manitowaning Bay					3	300	6	18000	900	5	1000
9	Kagawong	1	12	1500	5				24000	2000		
10	Badgely, Darche and Innis Islands.	1	16	2000	6	2	100	2			12	2400
11	Meldrum Bay.	2	50	8000	6				48000	6000		
12	Club Island.	2	27	2300	12	1	100	2	53000	4300		
13	Cockburn Island.	1	23	600	6	4	1300	8	42000	3500	2	400
14	West Bay					1	50	3	6000	300		
15	Cutler.					5	500	3	30000	1400		
16	Fitzwilliam Island.					8	1300	17	48000	2500		
17	Squaw Island.	4	111	11500	24	3	300	4	108000	8600		
18	Ducks Islands.	2	30	3000	12	5	650				5	750
19	South Bay Mouth	2	30	3700	13	6	800	13	78000	5500		
20	Killarney.					13	1500	26	98500	11300		
21	Bustard Island.	2	40	6000	12	12	1700	24	112000	7500		
22	John and Aird Island.	1	10	2000	5	3	300	4	12000	600	10	2000
23	Providence Bay.	1	15	1500	6	1	100	2	30000	2300		
24	Cape Robert.					1	200	2			4	800
25	Bedford Island					1	100	2			5	1000
26	South Side Manitoulin Island.	1	13	1500	5				24000	2000		
27	Pt. Aux Grondine and Byng Inlet					5	1200	7			6	1800
	Totals.	24	451		130	91		154	778500		92	
	Values.	\$		43300			12750		60500			18950
	<i>Georgian Bay.</i>											
1	Parry Sound.	6	94	22500	38	15	2210	27	225300	21800	1	150
2	Waubashene.					17	2690	31	77000	3835		
3	Penetanguishene.					11	550	22	55500	2835		
4	Collingwood.	1	25	3506	6	21	2030	42	156000	6100		
5	Meaford.	6	146	17000	17	21	1320	45	177000	12915		
6	Colpoys's Bay and Tobermory.	6	128	18300	31	32	1540	62	281300	28320		
	Totals	19	393		92	117		229	972100		1	
	Values.	\$		61300			10340		75805			150
	<i>Lake Huron (proper).</i>											
1	Cape Hurd to Southampton.	6	165	24500	31	41	3450	73	381600	25073	2	300
2	Southampton to Goderich	8	200	6000	18	7	1400		53200	3200		
3	County Huron, including Grand Bend.	2	64	4000	11	10	2180	23	96100	7600	8	1200
4	County Lambton, including St. Clair River	1	25	1500	6	66	7800	109	63000	2150	54	14900
	Totals.	17	454		66	114		205	593900		74	
	Values.	\$		36000			14830		38023			16400

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ARIO.

Quantity and Value of all Fishing Materials and the Kinds of Fish caught in the for the Year 1906.

KINDS OF FISH.														Value.	Number.
Herring, salted, brls.	Herring, fresh, lb.	Whitefish, lb.	Trout, lb.	Pickel or Doré, lb.	Pike, lb.	Sturgeon, lb.	Perch, lb.	Catfish, lb.	Mixed and coarse fish, lb.	Caviare, lb.	Sturgeon bladders, No.	Trout, salted, brls.	Whitefish, salted, brls.		
		32000	18000	13100	1500	700			42000					7,686 00	1
10		14600	20500	3500	3000	100			7500					4,313 00	2
		14500	7000	30100	1000	4000	200		1000	150		35		6,011 00	3
100			140000											15,000 00	4
50		42000	14000	40000										10,100 00	5
		13800	7500	15400	2500	800		50	50					3,839 50	6
		4800	5000	28200	6700	850				75				4,188 50	7
		17800	19600	15400	2500	750		50	50					5,445 50	8
		11400	89700	1500										10,260 00	9
		100400	13100	10000		2200			1600					12,574 00	10
		44000	306000									39		35,390 00	11
		20000	76000											9,600 00	12
	1000	44700	218300									14		26,490 00	13
18														180 00	14
85														850 00	15
67		15100	98000	15200	4300	700			1400	100			6	13,900 00	16
		152800	266200											41,900 00	17
			237000											23,700 00	18
20		62000	242800										15	30,830 00	19
		46800	55000	30100	7300									13,482 00	20
	14000	190000	92000	78500	1400	800		400				10	10	37,162 00	21
30	1000	4000		142400	500	2200		5600				10	10	15,834 00	22
			21000											2,100 00	23
	10000	6000	2000	8000										2,100 00	24
		5800	4000	22400	3500	5400								3,792 00	25
			42000											4,200 00	26
	10600	37000	2500	25500	12100	3600			10000	400				8,382 00	27
380	36600	879500	1997200	479300	46300	22100	200	6100	63600	725		108	41	.....
3800	1830	87950	199720	47930	1852	1768	6	488	1908	50750		1080	410	349,249 50	
		248500	384800	17400	10100									65,474 00	1
		11400	18900	26200	29500	1800		800	11200	50		13	25	7,789 00	2
9	3000	14700	33800		500							10		5,210 00	3
22	25300	79250	135810	50		15250	800	2600	1400					24,490 00	4
	2800	18000	410400									104		44,020 00	5
45	4300	8100	554700									151	6	58,515 00	6
76	35400	379950	1538410	43650	40100	17050	800	3400	12600	50		278	31	.....
760	1770	37995	153841	4365	1604	1364	24	272	378	35		2780	310	205,498 00	
759	78400	7000	649100		500	2400	57000		200	300		835	10	87,708 00	1
1		3100	88200											9,140 00	2
	21500	11100	148500	6800		900	65400		9400	1500		12		21,201 00	3
	151000	22100	81900	419000	3800	12000	36400	700	92000	1950	250			66,435 00	4
760	250900	43300	967700	425800	4300	15300	158800	700	101600	3750	250	847	10	.....
7600	12545	4530	96770	42580	170	1224	4764	56	3048	2625	200	8470	100	184,484 00	

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RETURN of the Number of Fishermen, Tonnage and Value of Tugs, Boats, Nets, &c.,
Year

Number.	DISTRICTS.	FISHING MATERIAL.														
		Tugs or Vessels.				Boats.			Gill-nets.			Seines.			Pound-nets	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Yards.	Value.	Number.	Yards.	Value.	Number.	Value.
	<i>Lake St. Clair.</i>			\$		\$				\$			\$		\$	
1	River Thames.....					20	430	...	*73	24	72	21	1500	800		
2	Lake St. Clair and De- troit River.....	8	16	2000	13	123	3500	276	...	..	...	64	7900	2945	8	2100
	Totals.....	8	16	2000	13	143	3930	276	73	24	72	85	9400	3745	8	2100
	Values.....	\$														
	<i>Lake Erie.</i>															
1	Pelee Island.....	4	97	17500	29	6	700	11	...	25000	9400	...	...	...	11	3975
2	Essex County.....	1	102	8000	7	41	6050	63	...	11500	2273	3	900	225	54	15500
3	Kent County.....	2	230	15000	24	68	14800	115	...	8000	800	...	...	...	105	37000
4	Elgin, West.....	1	33	6000	7	26	6150	43	...	14000	1600	...	...	...	49	16000
5	Elgin, East.....	12	98	22850	72	19	3250	47	...	124000	8500	...	...	...	4	1200
6	Houghton.....	3	82	9400	16	3	125	7	...	26000	1650	...	...	...	2	600
7	Walsingham.....	1	30	2000	6	24	990	55	...	71000	1050	13	5000	1600		
8	Long Point.....					17	650	42	...	5000	400	5	1800	450		
9	Charlotteville.....					22	1100	53	...	30000	900	6	2400	600		
10	Inner Bay.....					14	460	31	...	3500	175	4	1200	250		
11	Woodhouse.....	3	80	8000	18				...	32000	2500					
12	Haldimand County.....	7	80	16200	31	41	3182	72	...	78200	8300	5	1800	170	25	5500
13	Port Maitland to Port Colborne.....	3	27	6200	18	14	600	23	..	32100	4500	..	...	...	12	3000
14	Port Colborne to Niagara Falls.....					18	350	27	...	63300	350	..	...	...
	Totals.....	37	859	111150	228	313	38407	589	..	463600	42398	36	13100	3295	262	82775
	Values.....	\$														

* Dip nets.

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and the Quantities and Kinds of Fish caught in the **Province of Ontario**, for the 1906.

KINDS OF FISH.												Value.	Number.
Herring, salted, brls.	Herring, fresh, lb.	Whitefish, lb.	Trout, lb.	Pickeral or Doré, lb.	Pike, lb.	Sturgeon, lb.	Eels, lb.	Perch, lb.	Tullitsee, lb.	Catfish, lb.	Mixed and coarse fish, lb.	Caviare, lb.	
													\$ cts.
...	...	...	...	24500	6200	50	...	2500	...	4800	153000	...	7,751 00 1
...	2000	46200	...	100400	53000	38300	...	54400	4200	36400	512400	1225	40,969 50 2
...	2000	46200	...	124900	59200	38350	...	56900	4200	41200	665406	1225	...
...	100	4620	...	12490	2368	3068	...	1707	252	3296	19962	857	48,720 50
...	112400	9000	...	15700	40100	3400	...	13900	...	5800	15500	250	11,487 00 1
...	133700	63300	...	99800	214400	8500	...	66300	...	5400	243000	70	42,011 00 2
...	566300	7800	...	67600	1044800	12406	700	46800	10900	2600	224800	500	88,041 00 3
...	253800	31200	...	430200	1400	3900	...	27900	...	2700	27800	150	61,190 00 4
3	826700	13100	...	87500	...	900	...	21506	...	1300	22100	50	52,944 00 5
...	302800	6700	...	25200	7900	...	...	2600	...	200	900	...	18,767 00 6
...	93900	1000	...	12400	14500	800	...	32300	2700	1400	94500	...	10,757 00 7
...	...	...	...	11500	5800	1500	...	5700	7200	500	97600	250	5,248 00 8
...	600	500	100	33400	9500	...	...	30500	...	3500	58100	...	6,748 00 9
...	500	...	...	12000	5500	...	...	9000	...	10000	60500	...	4,330 00 10
...	269300	39100	...	212700	...	...	...	21200	...	...	...	...	39,281 00 11
...	143700	151600	2300	398600	2800	12000	...	36000	...	200	62200	250	†66,844 00 12
...	119500	35800	...	133300	20800	11000	...	15500	...	200	20600	700	26,186 00 13
...	...	...	...	17100	19400	11200	...	4800	...	...	5200	550	4,067 00 14
3	2823200	359100	2400	1557000	1386900	65600	700	334000	20800	33800	932800	2770	...
30	141160	35910	240	155700	55476	5248	42	10020	1248	2704	27984	1939	437,901 00

† In No. 12 add 8 brls. whitefish, \$80, and 150 sturgeon bladders, \$120.

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RETURN showing the Number, Tonnage and Value of Tugs, Vessels, Boats, and the

Number.	DISTRICTS.	FISHING MATERIAL.							
		Tugs or Vessels.				Boats.			Gill-nets.
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Yards.
	<i>Lake Ontario.</i>			\$			\$		\$
1	Lincoln County.....	2	42	4400	6	54	4300	74	108125
2	Wentworth ".....					13	2360	20	53500
3	Halton ".....					16	3160	33	108000
4	Peel ".....					4	662	8	10000
5	York ".....	1	1	250	2	15	1360	20	49500
6	Ontario ".....	1	1	400	2	4	75	7	13500
7	Northumberland County.....					19	913	32	72000
8	Prince Edward.....					53	1149	92	46300
9	Bay of Quinte.....					65	3365	124	29710
10	Amherst Island.....					35	1134	52	23050
11	Wolfe Island and Vicinity.....					21	685	27	3900
	Totals.....	4	44	5050	10	299	19163	489	517585
	Values	\$							
	<i>Inland Waters.</i>								
1	Frontenac County.....					98	957	163	3790
2	Leeds, Lanark and Addington.....					36	1239	57	309
3	Russell, Prescott and Carleton, and								
4	Renfrew Counties.....					52	450	65	1710
	Nipissing District.....	3	17	2900	14	20	2900	18	2500
	Totals.....	3	17	2900	14	206	5546	303	8300
	Values	\$							

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Quantity and Value of all Fish, Nets, &c., in the Province of Ontario—Continued.

KINDS OF FISH.														Value.	Number.
Herring, salted, brls.	Herring, fresh, lb.	Whitefish, lb.	Trout, lb.	Pickrel or Doré, lb.	Pike, lb.	Sturgeon, lb.	Eels, lb.	Perch, lb.	Tullibee, lb.	Catfish, lb.	Mixed or coarse fish, lb.	Trout, salted, brls.	Whitefish, salted, brls.		
														\$	
...	309100	47400	7000	12700	12700	...	1000	11200	...	200	5400	...	...	23,247	1
...	148000	18500	17100	...	21000	...	12000	2000	...	...	3700	...	...	12,043	2
...	280000	...	4000	...	...	...	...	...	...	...	5000	...	...	14,550	3
...	25000	4000	20600	...	1200	...	400	500	...	200	300	...	...	3,822	4
...	44600	12800	6300	...	1000	...	...	...	...	...	1100	...	...	4,213	5
...	20500	3500	4800	...	100	...	...	...	...	...	1200	...	...	1,895	6
...	32900	9900	31200	...	36300	...	...	23900	...	35300	48300	...	...	12,179	7
23	16900	40900	14300	2100	16500	1000	4100	11000	2000	13700	36300	...	...	10,426	8
42	38300	99300	...	20100	132500	...	7000	113300	...	198500	83500	...	13	41,909	9
5	8900	107300	...	15900	13200	4800	...	15500	...	500	...	4	...	14,472	10
8	...	10400	2000	3300	16900	7300	4700	16800	...	26600	35700	...	...	6,695	11
78	924200	354000	107300	54190	251400	13100	18400	194200	2000	275000	220500	4	13	...	...
780	46210	35400	10730	5410	10056	1048	1104	5826	120	22000	6615	40	130	145,469	...
19	8500	...	...	...	26900	...	1000	300	...	38100	72700	...	...	6,989	1
...	700	...	...	1200	13600	...	...	6600	...	42000	46900	...	...	5,664	2
...	...	500	...	3200	4900	100	...	2900	...	7600	13100	...	...	1,662	3
...	2500	4000	...	3200	500	*103100	...	...	...	...	...	...	...	16,078	4
19	11700	4500	...	1600	45900	103200	1000	9800	...	87700	132700	...	...	...	...
190	585	450	...	760	1836	8256	60	294	...	7016	3981	...	...	30,393	...

RECAPITULATION of the Number of Fishermen, Tonnage and Value of
and also the Kinds and Quan-

Number.	DISTRICTS.	FISHING MATERIAL.									
		Tugs or Vessels.				Boats.			Gill-nets.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Yards.	Value.
				\$			\$				\$
1	Lake of the Woods and Rainy River District.....	5	172	6700	14	37	6075	84	....	64000	7820
2	Lake Superior.....	19	299	44800	104	74	6210	85	....	485000	24720
3	Lake Huron (north channel).....	24	451	43300	130	91	12750	154	....	778500	60500
4	Georgian Bay.....	19	393	61300	92	117	10340	229	....	972100	75805
5	Lake Huron (proper).....	17	454	36000	66	114	14830	205	....	593900	38023
6	Lake St. Clair and Thames River..	8	16	2000	13	143	3930	276	*73	.....	72
7	Lake Erie.....	37	859	111150	228	313	38407	589	....	463600	42398
8	Lake Ontario.....	4	44	5050	10	299	19163	489	....	517585	21323
9	Inland waters of Frontenac, Leeds, Lanark, Addington, Russell, Prescott, Carleton and Renfrew Counties.....					186	2646	285	....	5800	702
10	Nipissing District..	3	17	2900	14	20	2900	18	....	2500	.....
	Totals ..	136	2705	313200	671	1394	117251	2414	73	3882985	271363

* Dip-nets

Number.	DISTRICTS.	Herring, salted, brls.	Herring, fresh, lb.	Whitefish, lb.	Trout, lb.	Pickarel or Doré, lb.	Pike, lb.
1	Lake of the Woods and Rainy River District....			388200	100106	244600	113800
2	Lake Superior.....		196500	420700	1743150	19250	2300
3	Lake Huron (north channel).....	380	36600	879500	1997200	479300	46300
4	Georgian Bay.....	76	35400	379950	1538410	43650	40100
5	Lake Huron (proper).....	760	250900	43300	967700	425800	4300
6	Lake St. Clair and Thames River.....		2000	46200		124900	59200
7	Lake Erie.....	3	2823200	359100	2400	1557000	1386900
8	Lake Ontario.....	78	924200	354000	107300	54100	251400
9	Inland waters of Frontenac, Leeds, Lanark, Addington, Russell, Prescott, Carleton and Renfrew counties.....	19	9200	500		4400	45400
10	Nipissing District.....		2500	4000		3200	500
	Totals.....	1316	4280500	2875450	6456260	2956200	1950200
	Values	\$ 13160	214025	287545	645626	295620	78008

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FISHERIES.

Tugs, Vessels and Boats, the Quantity and Value of all Fishing Materials, titles of Fish caught during the Year 1906.

FISHING MATERIAL.									OTHER FIXTURES USED IN FISHING.				
Seines.			Pound-nets.		Hoop-nets.		Night-lines.		Freezers and ice-houses.		Piers and wharfs.		Number.
Number.	Yards.	Value.	Number.	Value.	Number.	Value.	No. Hooks.	Value.	Number.	Value.	Number.	Value.	
		\$		\$		\$		\$		\$		\$	
.....	.....	.....	14	4000	12	1275	.....	.....	9	4350	3	1200	1
.....	.....	.....	35	9000	.....	.....	.....	.....	4	2190	1	200	2
.....	.....	.....	92	18950	.....	.....	.....	.....	7	2400	2	2250	.....
.....	.....	.....	1	150	.....	.....	.....	.....	17	5700	4	650	.....
15	846	580	74	16400	.....	.....	100	.....	11	3725	.....	.....	.....
85	9400	3745	8	2100	136	6050	3600	190	15	1925	23	3700	6
36	13100	3295	262	82775	*48	96	.....	.....	133	52000	1	500	7
+97	.....	97	.....	.....	182	3656	500	312	38	2530	1	40	8
.....
10	100	320	.....	.....	88	1680	2400	205	5	785	1	30	9
.....	.....	.....	22	5450	.....	.....	.....	.....	9	4900	.....	.....	10
243	23446	8037	508	138825	466	12757	6600	707	248	80505	36	8570	.....

+ Spears.

Sturgeon, lb.	Eels, lb.	Perch, lb.	Tullibee, lb.	Catfish, lb.	Mixed and coarse fish, lb.	Caviare, lb.	Sturgeon bladders, No.	Trout, salted, brls.	Whitefish, salted, brls.	Value.	Number.
										\$ cts.	
54000	.....	.....	4900	82900	.....	3050	100	.....	.....	91,303 00	1
300	.....	.....	6100	.....	9000	.....	.....	1138	158	241,847 00	2
22100	.....	200	.....	6100	63600	725	.....	108	41	349,249 50	3
17050	.....	800	.....	3400	12600	50	.....	278	31	205,498 00	4
15300	.....	158800	.....	700	101600	3750	250	847	10	184,484 00	5
38350	.....	56900	4200	41200	665400	1225	.....	.....	.....	48,720 50	6
65600	700	334000	20800	33800	932800	2770	150	.....	8	437,901 00	7
13100	18400	194200	2000	275000	220500	.....	.....	4	13	145,469 00	8
.....
100	1000	9800	.....	87700	132700	.....	.....	.....	.....	14,315 00	9
103100	.....	.....	.....	.....	.....	9950	.....	.....	.....	16,078 00	10
329000	20100	754700	38000	530800	2138200	21520	500	2375	261	.....	.....
26320	1206	22641	2280	42464	64146	15064	400	23750	2610	1,734,865 00	.....

7-8 EDWARD VII., A. 1908

STATEMENT of the Yield and Value of the Fisheries of the Province
of Ontario for the Year 1906.

Kinds of F sh.	Quantity.	Price.		Value.
		\$	cts.	
Whitefish..... brls.	261	10	00	2,610
"..... lbs.	2,875,450	0	10	287,545
Trout..... brls.	2,375	10	00	23,750
"..... lbs.	6,456,260	0	10	645,626
Herring..... brls.	1,316	10	00	13,160
"..... lbs.	4,280,500	0	05	214,025
Pickarel..... "	2,956,200	0	10	295,620
Pike..... "	1,950,200	0	04	78,008
Sturgeon..... "	329,000	0	08	26,320
Caviare..... "	21,520	0	70	15,064
Bladders..... "	500	0	80	400
Eels..... "	20,100	0	06	1,206
Perch..... "	754,700	0	03	22,641
Catfish..... "	530,800	0	08	42,464
Coarse fish..... "	2,138,200	0	03	64,146
Tullibee..... "	38,000	0	06	2,280
Total.....				1,734,865

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RECAPITULATION.

Of the Fishing Tugs, Boats, Nets, &c., employed in the Province of Ontario.

Articles.	Value.
	\$
136 tugs (2,705 tons), 671 men.....	313,200
1,394 boats, 2,414 men.....	117,251
3,882,985 yards of gill-net.....	271,363
243 seines (23,446 yards).....	8,037
508 pound-nets.....	138,825
466 hoop-nets.....	12,757
121 dip-nets.....	168
660 hooks on set lines.....	707
248 freezers and ice-houses.....	80,505
97 spears.....	97
Total.....	942,910

COMPARATIVE Statement of the Yield of the Fisheries of the Province.

Kinds of Fish.	1905.	1906.	Increase.	Decrease.
Whitefish..... lbs.....	2,817,420	2,875,450	58,030	
" (salted)..... "	78,400	52,200		36,200
Herring..... "	4,334,800	4,280,500		54,300
" (salted)..... "	897,400	263,200		634,200
Trout..... "	5,281,650	6,456,260	1,174,610	
" (salted)..... "	889,200	475,000		414,200
Pickarel..... "	3,236,940	2,956,200		280,740
Pike..... "	1,479,900	1,950,200	470,300	
Sturgeon..... "	401,350	329,000		72,350
Caviare..... "	17,100	21,520	4,420	
Eels..... "	20,150	20,100		50
Perch..... "	800,200	754,700		45,500
Catfish..... "	370,450	530,800	160,350	
Coarse fish..... "	1,939,600	2,138,200	198,600	
Tullibee..... "	7,450	38,000	30,550	
Bladders..... "	290	500	210	
Total.....	22,572,300	23,141,830	2,097,070	1,527,540
Total increase 1906.....			569,930	

APPENDIX No. 7.

MANITOBA.

REPORT ON THE FISHERIES OF MANITOBA FOR THE YEAR 1906, BY
INSPECTOR WM. S. YOUNG.

SELKIRK, Man., May 18, 1907.

To the Dominion Commissioner of Fisheries,
Ottawa, Canada.

SIR,—I have the honour to submit herewith my annual report on the yield of the fisheries for the province of Manitoba and Keewatin for the year ending 31st December, 1906, including statistics showing the number of men employed, the number of boats, nets, &c., their value and the varieties and quantities of fish caught.

The subdivisions of my district are the same as made in my last report, with the addition of all the waters to the north of the province of Manitoba, lying in the westerly portion of Keewatin, which was under the supervision of Inspector E. W. Miller, of Qu'Appelle, who has heretofore for a number of years reported on it. The subdivisions of my district are as follows: Lake Winnipeg and its tributaries, comprising the principal waterways, as the Nelson river, Playgreen lake and the minor streams flowing into Hudson and James bay at the north; Winnipeg river and its expansions—forming from the east: Lakes Winnipegosis, Waterhen and Dauphin, comprise all the waters of Winnipegosis, which lie about the centre of the province and extends to the northern boundary. Lake Dauphin lies to the south of Lake Winnipegosis, Waterhen lake or river lies in between the waters of Winnipegosis and Lake Manitoba. Lakes Manitoba, St. Martin and Shoal comprise Lake Manitoba, which lies between lake Winnipeg and Winnipegosis. St. Martin lies between the waters of Lake Winnipeg and Manitoba and is connected to both these bodies of water by the Little Saskatchewan river on the one side and the Fairford river on the other, which are also included in this district. Lakes Cedar, Mosse, Atikmeg and Cormoran comprise a chain of lakes lying to the north of the westerly part of the province of Manitoba, including the waters of the Big Saskatchewan, lying within Keewatin, Lakes Rock, Pelican, Swan and Louise and a district formed of small lakes to the south and west of the province, the principal ones of which are Oak lake, Clearwater lake, near Riding Mountain; Whitewater and Lake Killarney near Deloraine; Fish lake on the boundary line which lies partly in Manitoba and Dakota. The total value of the yield of the fisheries in my whole district for the year 1906 is \$1,217,645 or 6,136,000 pounds of whitefish, 46,000 pounds of trout, 6,161,000 pounds of pickerel; 2,825,000 pounds of pike, 325,000 pounds of sturgeon, 89,000 pounds of perch, 1,706,000 pounds of tullibees, 557,000 pounds of goldeyes, 200,000 pounds of catfish, 4,840,000 pounds of mixed and coarse fish, 1,725,000 pounds of fish used for home consumption were caught during the year 1906. There was also manufactured 37,000 pounds of caviare, making in all a total value of \$1,217,645.

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It will be noted that there is a decrease of \$285,970 compared with the year 1905. This is accounted for in the first place by an error in a report I received from the Imperial Fish Co., which report gave an over yield of 250 tons or 500,000 pounds. I do not know how this mistake happened. Upon investigation their books showed that an over yield was reported. The balance of the decrease is accounted for by two or three causes. In the first place Lake Winnipegosis was closed to summer fishing, no fish being caught during the summer of 1906 for the export trade. In the second place, all fishing closed down on the 31st of August in the waters of Lake Winnipeg, which took over a month off the summer season. The third cause was owing to the severity of the weather during the winter season. During the month of December when the ice on the lakes had reached a thickness of from four to eight inches, a storm came up and broke up the ice, carrying away large numbers of both fish and nets. In a very large number of cases, the nets were never recovered. This caused suspension of fishing operations until a new outfit of nets could be secured from Selkirk. This meant that very little fishing was carried on during the month of December. The whitefish were not caught after that to any great extent. During the winter season only a few licenses were issued for the whitefish grounds. The distance is so great to those grounds that the fishermen have given up the whitefish fishing during the winter season.

Considering the unfavourable weather and other causes the fishermen had to contend with during the past year, it was a fairly successful one. If the weather conditions had been favourable, we would have had the largest yield in the history of our fisheries to report. The department placing at my disposal ss. *Premier* for patrol service on Lake Winnipeg, the fishing regulations were well enforced. This was a move in the right direction by the department, because it is absolutely necessary that a patrol of the fishing grounds during the summer season should be made.

LAKE WINNIPEG AND ITS TRIBUTARIES.

An examination of the statistics herewith inclosed will show a decrease in the quantity of whitefish caught of 1,500,000 pounds, pike or jackfish of 250,000 pounds, sturgeon of 400,000 pounds; perch of 50,000 pounds, tullibees of 200,000 pounds, catfish of 300,000 pounds, mixed and coarse fish of 1,000,000 pounds, caviare of 14,000 pounds. Pickerel neither shows an increase nor decrease.

The total value of fish produced from this district is \$892,125, being a decrease of \$320,500 under the report of 1905.

LAKES WINNIPEGOSIS, WATERHEN AND DAUPHIN.

This district also shows decreases; whitefish of 500,000 pounds, pickerel of 450,000 pounds, pike or jackfish of 259,000 pounds, tullibees of 8,000 pounds, gold-eyes of 1,000 pounds, mixed and coarse fish of 500,000 pounds.

The total value of fish produced from this district amounts to \$146,205, or a decrease in value of \$79,565 under the report of 1905. Considering that no fish were taken from the waters of this district during the summer season, only winter fishing being allowed, you will readily understand that the fisheries for this district have been fairly successful.

LAKES MANITOBA, SHOAL AND ST. MARTIN.

This district shows a decrease in the catch of whitefish of 200,000 pounds under the year 1905; pickerel of 400,000 pounds, pike of 509,000 pounds, perch of 5,000 pounds, tullibees of 160,000 pounds. Goldeyes show an increase of 247,000 pounds.

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The total value of fish produced from this district amounts in all to the sum of \$111,740, or a decrease in value under the year 1905 of \$51,130.

The decrease in this district is accounted for by the following reasons: A less vigorous prosecution of the fishing; the severity of the weather during the winter; and there was practically no fish at all taken from the waters of Shoal lake, which has yielded abundantly in the past; especially jackfish or pike.

LAKES CEDAR, MOOSE, ATIKAMEG AND CORMORANT.

This district yielded during the year 1906: whitefish 350,000 pounds, trout 46,000 pounds, pickerel 86,000 pounds, pike 40,000 pounds, sturgeon 125,000 pounds, mixed and coarse fish 75,000 pounds. Home consumption, 50,000 pounds and caviare manufactured to the amount of 15,000 lbs. The fisheries during the year have been very profitable to those engaged in the industry.

The total value of the fisheries of this district is \$63,380.

The fish caught in the Rock lake and Oak lake districts are all used in the locality in which they are caught; so do not form any part of our export trade. The fish in both these districts are reported very plentiful, not showing any sign of diminution.

Summing up and for the purpose of comparison, we have the following:

Year.	Lbs.	Value.
1905	30,130,000	\$ 1,503,615
1906	24,647,000	1,217,645
Decrease	5,483,000	\$ 285,970

In conclusion, I would say, that the weather was anything but satisfactory for a successful season's prosecution of the fisheries; both during the summer and winter seasons. The latter part of the summer season was very stormy. Large number of fish were unfit for market, when taken from the nets, after being out in the nets so long. In some cases the nets were not raised for from five to seven days, when they were brought ashore. There was not only the loss of fish, but the nets were so badly used up that most of them were rendered useless by being in the water so long with dead and decaying fish in them.

The winter season was the coldest experienced in twenty years. The snow was also very deep on the lakes; which also interfered with operations. The fishermen's life during any winter season is a very hazardous one; but with the extreme cold and depth of snow, it was extremely so, during the past winter.

Under the circumstances, with the difficulties the fishermen had to contend with, I consider that although the yield is under that of previous years, it should be considered very satisfactory.

Fish produced during the winter season is valued at \$430,875. The total number of pounds of fish produced during this period was 8,648,000 pounds. As in my report for the twelve months ending December 31, the fishermen had a very hard time of it. The weather was of the severest kind and very deep snow covered the whole of the lakes of my district.

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In conclusion I would say, that great care has been taken in the preparation of the statistics for both the twelve months ending December 31, 1906, and the table of statistics for the three months ending March 31, 1907; all of which I beg to submit.

I have the honour to be, sir,

Your obedient servant,

W. S. YOUNG,

Inspector of Fisheries.

RETURN of the Number of Fishermen, Tonnage and Value of Tugs, Vessels and Boats, &c., in the Fishing Industry in the Province of Manitoba and Keewatin for the Year 1906.

DISTRICTS.	FISHING MATERIAL.												OTHER FIXTURES USED.							
	Tugs or Vessels.			Boats.			Gill-nets.			Seines.			Ponnd-nets.		Men employed, freezers and docks.	Freezers and Ice houses		Piers and Wharfs.		
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.		Number.	Value.	Number.	Value.	
1 Lake Winnipeg and its tributaries.....	28	2185	155500	200	500	20530	600	8000	480000	80000	9	297	300	..	300	176	219000	40	15000	1
2 Lakes Winnipegosis, Waterhen and Dauphin.	3	75	5000	10	70	840	334	3340	167000	33400	..	..	..	..	25	5	9000	2	1000	2
3 Lakes Manitoba, Shoal and St. Martin..	..	..	..	..	45	1500	272	2720	130000	27200	..	..	..	..	30	..	..	..	..	3
4 Lakes Rock, Pelican, Swan and Louise.....	..	..	..	..	6	90	6	10	600	100	..	..	..	..	..	..	..	..	..	4
5 Lakes Oak and Clear Water.....	..	..	..	..	4	60	4	6	360	60	..	..	..	..	..	..	..	..	..	5
6 Lakes Cedar, Moose, Atikmeg and Cormorant	3	41	6000	10	8	2000	24	2800	14000	28000	..	..	..	12	4560	30	2000	3	700	6
Totals... ..	34	2350	166500	220	633	25020	1240	10876	797960	168760	9	297	300	12	4560	385	184	230000	45	16700

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RETURN showing the Kinds, Quantities and Value of Fish in the Province of Manitoba and Keewatin for the Year 1906,

Number.	DISTRICTS.	KINDS OF FISH.												VALUE.	Number.
		Whitefish, lbs.	Trout, lbs.	Pickarel, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Tullibee, lbs.	Gold eyes, lbs.	Catsh, lbs.	Mixed and coarse, fish, lbs.	Home consumption, lbs.	Caviare, lbs.		
1	Lake Winnipeg and its tributaries.	5000000	.....	4500000	1000000	200000	75000	1600000	300000	200000	4000000	1000000	22000	892,125 00	1
2	Lakes Winnipegosis, Waterhen and Dauphin.	600000	.....	950000	750000	.....	.....	6000	7000	.....	500000	350000	.....	146,205 00	2
3	Lakes Manitoba, Shoal and St. Martin.	200000	.....	600000	1000000	.....	14000	100000	250000	.....	250000	300000	.....	111,740 00	3
4	Lakes Rock, Pelican, Swan and Louise. ....	.....	.....	15000	20000	.....	.....	.....	.....	.....	10000	15000	.....	2,250 00	4
5	Lakes Oak and Clear Water.	6000	.....	10000	15000	.....	.....	.....	.....	.....	5000	10000	.....	1,945 00	5
6	Lakes Cedar, Moose, Atikmeg and Cormorant.	330000	4000	80000	40000	125000	.....	.....	.....	.....	75000	50000	15000	63,380 00	6
Totals.		6136000	46000	6161000	2825000	325000	89000	1706000	557000	200000	4840000	1725000	37000		
Total values ..		429520	3220	369660	98875	32500	3115	59710	19495	16000	96800	51750	37000	1,217,645 00	

APPENDIX No. 8.

SASKATCHEWAN.

REPORT ON THE FISHERIES OF SASKATCHEWAN BY INSPECTOR
E. W. MILLER, FOR YEAR 1906.

QU'APPELLE, SASK., March 1, 1907.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit the following report on the Fisheries of the Province of Saskatchewan for the year 1906, together with statistical returns showing yield of fish, values of catch, plant, &c.

The year was on the whole a favourable one for the prosecution of the fishing industry, and a marked increase is to be noted in the amount of fishing done in the lakes north of the Saskatchewan River, both in the Grand Rapids and Prince Albert districts. In the southern portion of my district a mild winter with light snow fall gave rise to fears that the smaller lakes and rivers would fall very low but fortunately heavy spring rains maintained them in full volume until late in the summer. The relatively small and scattered lakes in the south part of the province are fished mostly by settlers for their own use, the number of men fishing regularly for sale in neighbouring towns and villages being very limited, but the capacity of the lakes will not admit of any large increase in the amount of net fishing being sanctioned. In some of the smaller lakes it has already been found expedient to confine the fishing to that done by hook and line so that as large a number as possible may share in the pleasure and profit to be thereby obtained.

With the vastly increased population in the southern part of the province, a much greater quantity of fish could be marketed than is forthcoming from the local sources of supply, which are indeed quite inadequate to meet the demand. In the north, the opposite state of affairs prevail: the possible output from the waters there is so much in excess of that required for local consumption as to readily admit of a large export. The problem of getting the surplus fish from the northern waters into the markets of our southern towns at a reasonable price is still to be solved.

Practically the whole catch from the lakes north of the Saskatchewan, except that portion used by the residents in their vicinity, is exported to the United States in spite of the import duty levied by that country and the cost of so long a haul. It would seem that the people of the United States are prepared to pay a much higher price for our prime fish than the residents of these western provinces will give, or that the freight charges on small consignments to provincial centres are not so much less than the cost of shipping in car lots to much more distant United States points as to compensate for the inconvenience of dealing with many firms instead of with one large buyer.

Probably a combination of these reasons is answerable for the existing conditions, but in any case it must be remembered that an immensely greater catch of fish is now being annually made in our western waters than could possibly be disposed of in the home markets at the present time. Nor would the prohibition of the export of fish ensure a better and cheaper supply to the provincial towns, for unless fishing operations at the northern lakes are carried on in the large way which is now made practicable by the foreign demand, the expense of opening and maintaining the necessary depots and lines of communication for getting the fish to the railway shipping points would become relatively too great to admit of the fishery being pursued with fairly remunerative results to the fishermen and operators.

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However while the amount of fishing allowed is carefully proportioned to the capacity of the lakes to remain properly stocked with fish, no real injury is being done and a large amount of fairly remunerative employment is afforded in the duller season of the year, and in places where the more ordinary occupations are not readily accessible.

In the main the close seasons are now well observed and but few prosecutions have been necessitated during the past year. Evasions of the spirit of the regulations have however proved more difficult to deal with, particularly in those waters which formerly fished by the Indian and Halfbreed alone, are now worked on quite an extensive scale for the export trade, before referred to. The conditions affecting the fisheries in this district during recent years have changed so much, that the announcement of a proposed early and thorough revision of the regulations has been most favourably received, and such has certainly become very necessary.

QU'APPELLE DISTRICT.

In the Qu'Appelle lakes the supply of pike, pickerel, perch and mullet continues very abundant: Tullibee owing to the disease reported last year, have become scarce. Whitefish are not at all plentiful but the yearly catch seems now to be steadily though slowly augmenting. The lakes in the Qu'Appelle valley are all rich in fish food, and individuals of all species attain a large size; among those caught during the year were several pike of over 30 lbs. weight, pickerel and whitefish of six and eight pounds. Perch are very plentiful but few are caught; the mesh of the authorized nets being too large, and most of the anglers using too large a bait for perch. A new dam was completed at the outlet of Katepwe lake by the Saskatchewan government provided with fishway: the waters of the lakes above had fallen over three feet below their average level at the end of the summer, so the dam should have a good effect next season.

An increased amount of fishing is reported from Fishing lake and the other small lakes in the vicinity of the Edmonton line of the Canadian Northern Railway and though only the coarse fish are to be found there, they are much appreciated by the settlers. At Devil's lake, high water and increased supply of fish are reported—this also is a coarse fish lake only and the catch is mainly by hook and line. The local guardian here has to exercise much vigilance to prevent the construction of traps in the streams, the foreign settlers in this district being very persistent in their attempts to catch fish that way irrespective of size or condition. At Long lake the local overseer reports that the fishing has been specially good throughout the year. A much greater number of licenses for this lake was issued than in any previous year, but a great majority of them were to actual settlers in the vicinity of the lake who caught only the limited quantity necessary for their own use and there is no reason at present to consider the lake over fished. The dam built on the Qu'Appelle river at Craven has diverted a considerable flow of water into Long lake this summer and with it in operation the lake should not again become so shallow as to threaten the loss of a large proportion of its fish supply.

PRINCE ALBERT DISTRICT.

Further attempts were made during the year to revive the fishery for export purposes in this district, and though applications for commercial licenses were not entertained, a large amount of fishing was done at the Trout lakes under domestic licenses and the operators had a successful season. Though the fishermen held individual licenses according to the regulations, they were practically fishing for parties who outfitted them and bought their fish and it was really a commercial fishery. The supply of fish at the various large lakes in this district which even now are within a reasonable hauling distance of a railway shipping point at least during the winter season, is so largely in excess of the very limited local requirements that the establishment of an export trade on a much larger scale is certainly only a question of time. The existing regulations do not properly provide for it however, and there is consequently a certain amount of irregularity prevailing with which it is difficult to cope. The lakes are not fished in the summer owing to the difficulties in the way of transporting the catch, and

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with the limited winter season there is little danger of the fish supply being depleted so long as the extent of net to be used is properly regulated. The possibilities of the business had been sufficiently shown in the early part of the year, to lead to a large number of applications being lodged for commercial privileges during this winter season, but none were granted and the fishing was again conducted on the domestic license system, though much more extensively. In the more outlying lakes, fishing is done solely for the food supply of the Indians and other residents in their vicinity; and the catch depends materially on the success of the hunt. Licenses have to be secured by those selling fish and the close seasons are enforced as far as possible. Abundance of fish is reported in these waters and there is no doubt that they can furnish a large surplus for export as soon as they become more accessible.

BATTLEFORD DISTRICT.

Here again increased settlement has led to more enterprise being shown in the fishing industry. Twice as many licenses were taken out for Jackfish lake as heretofore. Turtle lake and Cold lake were also fished more largely. These lakes are well stocked with fish and capable of standing still larger calls on their resources. Commercial licenses are also being sought here and Turtle lake is being fished on a like basis to that of the Trout lakes before referred to.

GRAND RAPIDS DISTRICT.

The winter fishing at Moose lake was actively pursued for the first two months of the year principally by men employed under the concession granted to Messrs. Merritt and Coffey, though a large quantity was also caught and sold by the Indians and other qualified residents who had obtained licenses. The catch was larger in the aggregate than in the previous year though the catch per net was not so good. Fifty teams were employed in freighting in the catch from Moose lake to the shipping point, Mafiking, in the Canadian Northern Railway, 320 miles from Winnipeg. The haul by trail was from 110 to 130 miles and cost from \$1.60 to \$1.75 per 100 lbs., making the price paid to the fishermen on the ice about three cents a lb. for whitefish. Practically no summer fishing was done at this lake owing to difficulties of transport, and this winter the fishing is being more actively pressed in Cormorant and Atikameg lakes to the west, for the fish from which convenient lines of transport via The Pas have been made available by the construction of the branch of the Canadian Northern Railway to that point on the Saskatchewan river. At Cedar lake operations have not been so active in the winter season, but a large catch was made in the summer principally by means of the pound-nets. The use of the latter had certainly much diminished the success of the gill-net fishery and men who started with gill-nets in many cases removed from the lake not finding the catch good enough to pay them. The pound-nets can be worked by a force of eight or ten men and while no bar has been placed in the way of Indians and other residents desiring to fish on their own account for the market, the use of pounds undoubtedly tends to diminish the opportunities of profitable employment in the fishery enjoyed when only gill-nets were allowed.

In Cumberland and Namew lakes, the fishery for local consumption proceeded under normal conditions, a slightly smaller catch being made owing to the successful hunting season. No pound-nets were used for the sturgeon fishery, they not having proved at all successful in the former season at these lakes and the services of so small a number of resident gill-net fishermen were procurable, that an insufficient quantity of fish was forthcoming to justify the expense of the buyers. Consequently after a month's trial, the tug service on the Saskatchewan between Cumberland and Cedar lake necessary for the transport of the fish was withdrawn and no further fishing for export was carried on. Some amount of difficulty and friction is being experienced in reconciling conflicting interests in these northern districts. The operations of companies

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worked by outside capital, who wish to employ expert fishermen from outside points not unnaturally seem to the old residents there to militate against their interests, yet if the fishing is wholly confined to that done by genuine residents in the vicinity of the lakes, the output is not sufficiently large nor regular to secure the investment of capital in establishing the necessary lines of communication, securing markets, &c., without which the value of the surplus fish at the lakes is really nil. While therefore fair or even preferential treatment should be accorded to local interests, too strict a limitation of the fishing privileges in these northern lakes is scarcely reasonable nor in the best interests of the country at large. There is of course a tendency among those who fish for the outside markets to endeavour to concentrate their efforts on those lakes which are more readily accessible, and this if not checked would lead to overfishing at some points. With proper diffusion of the fishing and the maintenance of close seasons, while a repetition of the phenomenal catches of first seasons in virgin waters cannot be looked for, there is no reason to fear for the continued productive power of our waters.

I am, sir,

Your obedient servant,

E. W. MILLER,

Inspector of Fisheries

SASKATCHEWAN.

RETURN of the Number of Fishermen, Tonnage and Value of Tugs, Vessels, Boats, Nets, &c., and the Quantity and Value of all Fish in District No. 1, Northwest Territories, Province of Saskatchewan, for the Year 1906.

DISTRICTS.	FISHING MATERIAL.										OTHER FIXTURES USED IN FISHING.				Whitefish, lb.	Trout, lb.	Pickereel, lb.	Pike, lb.	Sturgeon, lb.	Tullibee, lb.	Mixed and coarse fish, lb.	Value.	Number.
	Tugs or Vessels.		Boats.		Gill-nets.		Pound-nets.		Freezers and Ice House.		Piers and Wharfs.												
	Number.	Tonnage.	Value.	Men.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.											
1 Qu'Appelle. ....	...	...	...	1500	128	7500	1250	...	...	...	...	...	...	65000	...	160000	230000	...	15000	35000	19,750	1
2 Macleod. ....	...	...	...	800	6	450	75	...	...	...	...	...	...	1000	40000	4000	8000	...	...	3000	2,930	2
3 Battleford. ....	...	...	...	350	74	11000	1830	...	...	...	...	...	...	480000	10000	10000	40000	1000	...	40000	31,000	3
4 Prince Albert. ....	...	...	...	2750	98	13600	2250	...	...	...	...	...	...	625000	50000	160000	180000	12000	...	50000	55,600	4
5 Cumberland.	1	6	150	1500	11	2000	350	3	2	300	2	66	...	75000	5000	12000	45000	60000	5000	50000	13,450	5	
6 Grand Rapids.	2	45	6250	2400	56	25000	4110	12	3500	4	600	150	...	950000	60000	150000	100000	20000	150000	83,900	6		
Totals.	2196000	155000	506000	603000	173000	40000	328000	
Values. \$	131760	9300	25300	18090	17300	1600	3280	206,630	...	

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APPENDIX No. 9.

ALBERTA.

ANNUAL REPORT OF THE FISHERIES OF ALBERTA.

OFFICE OF THE INSPECTOR OF FISHERIES,

EDMONTON, June 1, 1907.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report and statistics of fisheries, Province of Alberta for the year closing December 31, 1906.

The yield of fish for the year was about the same as usual. The only lakes which are heavily fished for market, viz., Pigeon lake and White Whale lake, yielding good returns of fine whitefish; the quality of the fish from White Whale lake is improving every year. Summer fishing at these two lakes was carried on to a greater extent than usual, to supply the market at Edmonton, and some towns along the line of the Calgary and Edmonton railroad.

Winter set in very early, and before the ice thickened there was a very heavy snow fall, which caused the water to rise over the ice, rendered the lakes dangerous for travel, and prevented much fishing being done before Christmas.

The coarse fish of the district have been numerous, and have no doubt been a welcome change of diet to many settlers all over the district. As a great many fish are killed with hook and line, it is a very difficult matter to get at the exact quantity of coarse fish caught.

I had special estimates made by all guardians, of the amounts of fish caught, and the quantities given may at least be called reliable estimates. If it errs the error is in underestimating.

It is surprising the very few boats of any kind to be found on any of the lakes or rivers of the district. A settler living on the shore of a fine lake will hitch up a team and drive a good many miles along the shore to reach a point that he could get to by boat in a very short time, even in lakes where water fowl are numerous, and where a boat or canoe would greatly assist a hunter, no canoes or boats are to be found. On lakes where there is an Indian or half-breed settlement these remarks do not so much apply.

There was no commercial fishing at Lesser Slave lake during the year. The difficulties of transport and its cost render the business unprofitable.

There is a good demand for all the whitefish that can be had within a reasonable distance of a railroad and prices paid are good. Buyers complain that they cannot be sure of getting a sufficient quantity of fish from men fishing with domestic licenses. There are many lakes on the northern outskirts of Alberta that are full of fish, and that would be fished if commercial licenses were granted for them. It would perhaps assist in opening up the country and afford a chance to natives and others of earning some money if a limited number of commercial licenses were granted. Fishing would only be possible in winter, unless cold storage were established I would not recommend the granting of commercial licenses in lakes where settlers are coming in. There is no doubt that in many lakes in the unsettled portions of the country the fish are too numerous. Pigeon lake and White Whale lake are examples of what I mean. At one time the fish in these two lakes were so numerous that their quality was very poor, even a dog could not fatten on them, now there are no better fish anywhere, and with proper protection these lakes will remain good for all time.

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The building of the Grand Trunk Pacific Railway will open up many new lakes in the northwestern part of this district. Already there are a number of settlers along the line of the road, some as far west as the Jasper valley, or the Yellow Head pass. When construction begins on the road in the mountains, the streams there which are full of trout will require protection.

The Canadian Northern Railway brings the lakes in the northeastern part of this district, closer to a market, and I would not be surprised to see a good many men applying for domestic licenses in these lakes and fishing for a living during the winter months of the year.

Lac la Biche.—This lake now contains as many fish as are good for it. Though the lake has been tried now by experienced men, accustomed to fish in lake Winnipeg and other northern waters, they have not been able to catch fish after the real cold weather sets in. If the fish could be located a profitable fishing industry would spring up. This lake in my opinion could stand one commercial license, without doing it any harm, especially if the fishing was limited to the winter months of the year.

Touchwood lake.—This lake lies some twenty miles north of Lac la Biche. Some Lac la Biche half-breeds took out licenses for this lake, and under the direction of a lake Winnipeg man made a good fishery during the winter. An Edmonton man bought the fish, and shipped it to a Winnipeg firm. The whitefish in this lake will average about four pounds and are in fine condition. Pickerel are also fairly numerous in this lake. Within a radius of thirty miles of this lake there are many lakes where the conditions are exactly similar. Trout lake contains trout similar to that of Cold lake. None of these lakes are very large, and are only separated one from another by short portages of from one to six miles.

Buck lake.—Thirty miles south west of Lac la Biche, which was at one time pretty well fished out is now well stocked with large whitefish. Formerly there were quite a number of half-breeds who lived at this lake and made a fishery there in the fall for winter use, and so fished out the lake. This fall fishing during spawning season, was stopped and the lake is now full of fine fish, there are very few Indians who frequent this lake now.

Beaver lake.—The south end of this lake runs within three miles of Lac la Biche. Fish spawn in it about October 7, while in Lac La Biche they do not begin to spawn until the fifteenth. The lake which at one time was pretty well fished out is now well stocked with fish.

Whitefish lake.—This lake is picking up, not because it is protected, but because it is not as heavily fished as in former years, many of the Indians having moved on to the reserve at Saddle lake.

Little Whitefish Lake.—Lying north of Victoria or Pakan, is a good little lake not much fished. The present close season for whitefish gives it no protection as the fish in it do not spawn until after Christmas.

Little Devil's lake.—The whitefish in this lake do not increase as I expected they would, the lake is really just a widening of the Sturgeon river, which flows out of Lake St. Anne, and as it is now well stocked with fish there is nothing to prevent their passage to Devil's lake. The lake swarms with pike, I think they would have to be killed off before whitefish could make much headway in the lake. As this lake at one time was swarming with whitefish, it is a pity it could not be brought back to its former state, as it is so close to Edmonton.

White Whale Lake.—This lake is miscalled Wabamun on the maps. Wabamun is not an Indian word it means nothing, Wabamao is the Cree name of the lake and really means the Big Fish lake, as the Indians have a tradition of a very big fish of a white colour having been seen there. The white traders on this account gave it the name of White Whale lake. The lake is well stocked with fish. Next summer the Canadian Northern Railway will be running to the lake, and will permit of summer

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fishing for export. Fishing on this lake is now confined to residents within a radius of two miles of the lake. Many of the settlers have no experience as fishermen, and were only learning the business last winter, and did not do much, especially in first part of season. Water overflowing the ice also was a great hindrance to the fishermen nearly all winter. The half breeds of Lake St. Anne were previous to this year allowed to fish in this lake, this is not now allowed.

Lake Ste. Anne.—This is another lake where the whitefish cannot be caught after cold weather sets in. The fishermen now that they cannot get leave to fish in White Whale lake will make greater effort to locate the fish, which are now very plentiful.

Shining Bank Lake.—This lake west of Lake Ste. Anne, well stocked with large whitefish, is now attracting settlers and fishermen. I tried to send an officer there during the winter but the state of the roads was such that it was impossible for one man and a team to pass through. This lake will hereafter require supervision.

McLeod Lake.—The same remarks apply to this lake as to the previous one. The largest whitefish in the country are killed in this lake, they will average seven or eight pounds. Worms are very bad in this lake, a net set at night will be eaten up entirely by morning. Tanning the nets gives some protection but does not always prove effectual.

Pigeon Lake.—A wonderful little lake, heavily fished for years, the fish are still plentiful and always fat. Fishing in this lake is now confined to residents within a radius of one and a half miles. If summer fishing were to be carried on to any extent, the residence limit will have to be cut down.

Buck Lake.—Settlers are coming in around this lake, and in another year it should have a resident guardian.

Battle River Lake.—A beautiful little lake not too heavily stocked with whitefish. No fishing for sale on any kind of license should be allowed in this lake, for in its present state it will not stand heavy fishing.

As has been previously stated coarse fish are plentiful all over the district. There are many lakes which contain no fish, and which are apparently fit to support fish. Except in Pigeon lake there is very little net fishing done south of the Saskatchewan river.

The fishery officers have broken up many fish traps and cleared away obstructions in many of the streams. In some cases prosecutions would have been made could evidence have been obtained. The work of a fishery officer amongst foreign settlers is difficult, as they speak many tongues, and are in many cases ignorant of the law. They all seem to think they have a right to do as they please on any stream flowing through their homestead, they make dams to hold water for their cattle, and these dams are regular fish traps where fish can be slaughtered with pitchforks, and in many cases thrown ashore by hand.

As I understand, the fishery regulations of the Dominion are now under course of revision, and consolidation, and as I have made a special report as to amendments I consider advisable in the interests of the fisheries of this district, I will not in this report make any suggestions, more than to say, that in a district covering a great extent of country like this one does, where local conditions vary so much, that it is a difficult matter to frame any regulations that will apply equally well to all parts of the district. Especially is this the case with regard to close seasons during spawning seasons. If the officer in charge of a district were given some discretionary power in this matter, the fish in some lakes would receive more protection than they do. I believe from my experience that the time of spawning is regulated to a great extent by the temperature of the water. When we have an early winter and the water gets cold early in the season I have noticed that fish spawn sooner than when the opposite conditions obtain.

The officers employed in this district have all rendered good service.

I am pleased to report that I have succeeded at last in getting the large sawmills at Edmonton to put in burners at their mills and there is now no sawdust deposit

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in the Saskatchewan river at this point, so I can now call down the small mill owners all over the district with more effect than formerly.

It is often thrown up to me by settlers who have been warned by fishery officers not to deposit manure, &c., in small streams, that I allow the city of Edmonton to dump their sewage and all the filth of a large town into the Saskatchewan river without protest. The settlers along the river below Edmonton are not at all pleased with the present state of this matter, there is no doubt that many cases of typhoid fever which was very prevalent last winter, were caused by drinking the water of the Saskatchewan impregnated with sewage from the city of Edmonton.

I have the honour to remain, sir,

Your obedient servant,

HARRISON S. YOUNG,
Inspector of Fisheries, Alberta.

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PROVINCE OF ALBERTA.

RETURN of the Number of Fishermen, Tonnage and Value of Tugs, Boats, the Quantity and Value of all Fish in the Fishing Industry in the Province of Alberta, for the Year 1906.

Number.	Districts.	FISHING MATERIAL.						KINDS OF FISH.						Value.	Number.
		Boats.		Gill-nets.			Hand lines.		Whitefish.	Pickerel.	Pike.	Tullibee.	Mixed and Coarse Fish.		
		No.	Value	Men.	No.	Fathoms.	Value	No.							
1	Lac La Biche.....	70	700	90	270	8,100	810	..	..	200,000	50,000	60,000	30,000	100,000	1
2	Beaver Lake	20	200	23	69	2,070	205	..	..	60,000	..	..	..	25,000	2
3	Heart Lake	11	110	10	30	900	90	..	..	20,000	..	..	..	10,000	3
4	Whitefish Lake.....	10	50	20	60	1,800	180	..	..	25,000	..	..	..	60,000	4
5	Saddle and L. Whitefish Lakes	10	50	35	55	1,400	165	..	..	7,900	..	..	..	4,000	5
6	Beaver, Dried Meat and Buffalo Lakes.....	56	590	700	86	2,580	260	450	450	..	..	..	..	141,000	6
7	Pigeon Lake.....	35	350	147	740	22,200	2,220	175	175	225,000	20,000	30,000	..	50,000	7
8	Conjuring and Gull Lakes..	26	260	175	60	1,800	180	100	100	..	..	9,000	..	11,000	8
9	Little Devil's Lake.....	6	60	100	4	126	12	100	100	120,000	3,000	8,000	..	4,000	9
10	St. Anne Lake.....	30	300	50	100	3,000	300	..	..	200,000	1,000	2,000	..	2,000	10
11	White Whale Lake.....	20	200	80	150	4,500	450	..	..	..	..	..	..	1,000	11
12	Bad, Jackfish and Baptiste Lakes.....	6	30	60	36	1,080	110	100	100	..	500	7,000	25,000	1,000	12
13	Lac La Lune.....	20	200	15	50	1,500	150	..	..	30,000	5,000	..	..	15,000	13
14	Buck, Big and Battle Lakes..	4	40	20	15	450	45	..	..	30,000	..	..	..	85,000	14
15	Cooking, Hasting and Coal Lakes.....	16	160	25	55	1,410	135	..	..	..	..	5,000	..	4,000	15
16	Finchwood Lake.....	..	..	8	40	1,200	120	..	..	50,200	2,600	3,100	..	250	16
17	Saskatchewan River.....	..	..	100	30	900	90	..	..	..	..	..	..	7,000	17
	Totals.....	340	3,300	1,658	1,850	55,010	5,522	825	825	968,100	82,100	136,100	55,000	520,250	..
	Values	48,405	4,105	4,083	1,650	10,405	68,648

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RECAPITULATION

Of the Yield and Value of the Fisheries for the season 1906, in the Provinces of
Manitoba, Saskatchewan and Alberta.

Kinds of Fish.	Quantity.	Value.
		\$
Whitefish.....Lbs.	9,300,100	609,685
Trout....."	201,000	12,520
Pickarel....."	6,749,100	399,065
Pike....."	3,564,100	121,048
Sturgeon....."	498,000	49,800
" caviare....."	37,000	37,000
Perch....."	89,000	3,115
Tullibee....."	1,801,000	62,960
Catfish....."	200,000	16,000
Gold eyes....."	557,000	19,495
Coarse and mixed fish....."	7,413,250	162,235
Total for 1906.....		1,492,923
Total for 1905.....		1,811,570
Decrease.....		318,647

RECAPITULATION

Of the Capital invested in the Fisheries of the Provinces of **Manitoba,**
Saskatchewan and Alberta, for the Year 1906.

Articles.	Number.	Value.	Total.
		\$	\$
Fishing tugs, 2,401 tons.....231 men	37	172,900	
" boats.....3,700 "	1,753	37,620	
			210,520
Gill-nets.....fathoms	912,520	184,187	
Seines....."	297	300	
Pound-nets....."	27	8,860	
Hand lines....."	825	825	
			194,172
Freezers and ice-houses.....	190	230,900	
Fishing piers and wharfs.....	51	16,910	
			247,810
Total.....			652,502

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APPENDIX No. 10.

BRITISH COLUMBIA.

REPORT ON THE FISHERIES OF BRITISH COLUMBIA FOR THE
SEASON OF 1906, BY THE INSPECTORS C. W. SWORD, J. T. WILLIAMS
AND E. G. TAYLOR.

DISTRICT No. 1.

NEW WESTMINSTER, B.C., March 1st, 1907.

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to inclose statistics of the Fisheries of District No. 1, British Columbia, for the year ending 31st December, 1906.

The great falling off from the previous year is of course accounted for by the difference in the salmon pack.

Comparing this, 226,774 cases, with the pack four years ago (1902), 327,198 cases, it will be seen that there is a decrease of 100,000 cases. As regards the sockeye pack the decrease however is even more 178,787 cases (to which should be added 4,220 cases packed in Victoria) in 1906 against 295,670 cases in 1902.

The Puget Sound sockeye pack was this year 178,748 cases, practically the same as this district, against 372,301 cases in 1902.

There were fewer canneries operated this year than in 1901; 24 against 38, and the number of fishermen was reduced from 5,552 to 3,502.

The decrease it will be seen is more than accounted for by the decrease in the salmon taken, other items showing on the whole an increase.

Two Canadian companies have recently gone into the halibut fishing, but owing to the late date at which they began to operate, the quantity of fish taken by them did not materially affect the returns.

Your obedient servant,

C. B. SWORD,

Inspector of Fisheries.

DISTRICT No. 2.

VANCOUVER, B.C., February 20th, 1907.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to inclose my annual statistical report of the Fisheries of the Northern Coast of British Columbia, District No. 2, for the year ending December 31, 1906, including statement of salmon packs for the different canneries. These returns show a considerable increase in the aggregate, the total value of fish and fish products in 1906 being \$2,539,474, against \$2,011,199 in 1905.

This increase is principally due to the extended operations in the salmon canning industry, and also to the general prosperity of the district, owing to the rapid increase in population and railway development.

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This industry is likely to further increase in the near future, and I anticipate the early development of all branches of the deep sea fisheries. The total pack of salmon for the district for the season of 1906 is as follows :—

	Cases.
Sockeye	263,522
Cohoe	31,275
Spring	22,277
Humpback.....	45,101
Total.....	362,175

Against in 1905 :

	Cases.
Sockeye	228,232
Cohoe	12,342
Spring	19,864
Humpback	9,411
Total	269,849

Approximate detailed decrease and increase season 1906.

	Cases.
Skeena River increase.....	50,000
Rivers Inlet "	38,000
Northern Coast "	4,000
Naas River decrease.....	200

I am gratified at being able to report an increase of some 90,000 cases in the salmon pack of 1906, over that of 1905, which has occurred principally on the Skeena and Rivers Inlet, the increase in the catch of sockeye has been comparatively small, some 40,000 cases, the principal increase has been in the catch of 'fall fish,' these salmon are becoming more valuable and commercially saleable each year, owing to the gradual decrease of the sockeye salmon. I may state in this connection that the increase in the catch of salmon this season is attributable to the increase in the number of canneries in operation, and the consequent increase in the number of fishing boats and nets, and not to any increase in the amount of salmon.

SKEENA.

With reference to the Skeena river, I may inform you that the run of spring salmon was phenomenal, vast quantities being caught, some being mild cured and others being canned. It was admitted by all to have been one of the best runs of spring salmon ever recorded in the history of the Skeena. The new snag scow which we hope to have in operation this season, will be of invaluable assistance in clearing the river of the great quantity of snags and boulders that are a constant menace to fishermen, and cause an almost incredible amount of destruction to nets, the snag scow will supply a long felt want and will be received by the cannerymen and fishermen with great rejoicing. I consider the removal of these snags will materially assist in increasing the pack, as fishermen are constantly getting 'snagged' and thereby losing the whole day.

I regret to say that we have had considerable trouble with the Babine Indians over the erection of barricades, this culminated in the arrest and imprisonment of some of them, the ultimate result was a conference at Ottawa, with the Minister of Marine and Fisheries, at which a basis of arrangement was arrived at satisfactory to all parties. With this exception there was comparatively little trouble on the Upper Skeena.

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COPPER RIVER.

I am pleased to report that work is in progress on the removal of the Copper river obstruction, the contract was let in October last, and work commenced immediately, and we anticipate that the obstruction will be entirely removed by the end of March next. This work will open up an immense area of spawning ground which the salmon have been unable to reach, as heretofore, owing to these obstructions in the shape of rock slides.

I consider the removal of obstructions of this character will materially assist us in our endeavour to replenish the sockeye fisheries of the Skeena.

RIVERS INLET.

With reference to Rivers Inlet I am pleased to report an immense run of sockeye, surpassing in quantity any run hitherto reported, all the seven canneries in operation 'filled up,' and the superintendent of the Rivers Inlet Hatchery reports that the spawning grounds of Oweekayno lake were densely populated with sockeye and coho.

I consider the success attending the salmon canning operations on this Inlet during the last three seasons is attributable to the favourable climatic conditions.

Fishery Overseer Nordschow reports that the Fishery Regulations were well observed during the season and that the spawning grounds were carefully guarded, the Indians obtaining their winter supply of food according to the Fisheries Act and Regulations.

Taken altogether the existing conditions on Rivers Inlet in connection with our sockeye salmon fisheries are extremely satisfactory.

NAAS RIVER.

Regarding the Naas river, I may inform you that the pack of salmon amounted to approximately the same as last season, with the same number of canneries in operation, the run of coho salmon was good, but the sockeye show a slight decrease.

My opinion is with reference to this river, that until we remove the obstruction that I reported on last season, at the mouth of Magiarden lake we shall see no perceptible increase in the sockeye run, we must open up this immense area of spawning ground before we can expect any increase in the quantity of salmon.

Also a snag scow is an absolute necessity for this river and will be of vast assistance in clearing the principal drifts of the large snags that accumulate there, and ruin so many of the nets. Representations have been continually made to me by cannery-men and fishermen for several years back, in this connection.

My suggestion relative to this matter, namely to transfer the small snag scow now in operation on the Skeena river to the Naas, is I believe contemplated by the department.

NORTH COAST FISHERIES.

The statistics show a slight increase in the catch of salmon on the North Coast fisheries, climatic conditions influence these fisheries somewhat, but the catch generally averages about the same; this coming season we should have again a slight increase, in view of the erection of an additional cannery at Kimsquit.

DOG SALMON OR QUALO.

The industry of salting dog salmon has considerably increased during the last two years, this is followed almost exclusively by the Japanese, who ship these fish to Japan, they are caught principally by the Indians with their gill-nets, though two of them have drag seines, and sell their catches of fish to the Japanese. The Japs have

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erected several salteries for this purpose and succeed in making a very good percentage on the invested capital.

HALIBUT.

I may inform you that three quarters of the whole of the British Columbia catch of halibut is caught in District No. 2, but is taken to Vancouver and exported from that port, only a comparatively small quantity being exported direct from my district, therefore the statistical returns are forwarded to the department by Inspector Sword, in his report as it has been customary for the port from which the fish are shipped, to make the returns. I trust that this immensely valuable commercial product will receive the protection of the department, as foreign vessels are undoubtedly rapidly depleting our halibut banks.

I must again call the attention of the department to the deep sea fisheries in my district. The population is increasing with leaps and bounds, and I consider it of vital importance that the regulations under which these fisheries are prosecuted should receive the attention of the department. My district in a year or so will contain a large city, that will be the commercial centre and shipping point for our deep sea fisheries, industries will spring into existence and are already contemplated, and being organized, and it behooves us to anticipate and prepare for the protection of these valuable commercial assets. In my district lie the most valuable fisheries in British Columbia, embracing as it does the Queen Charlotte Islands, where all species of fish are in countless numbers, and I am anxious to have these fisheries protected, so that future generations, who will make these localities their homes, may participate in this valuable heritage.

I have the honour to be, sir,

Your obedient servant,

JOHN T. WILLIAMS,

Inspector of Fisheries.

DISTRICT No. 3.

NANAIMO, B.C., March 28, 1907.

To the Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to inclose my statistical report of the fisheries for District No. 3, of British Columbia, for the year ending December 31 1906.

The value of the fisheries in my district has advanced very substantially during the past year, and with the exception of the run of sockeye salmon at the southern end of Vancouver Island the various branches of our fisheries are in a prosperous condition.

A greater number of operators were engaged in the fisheries and the amount of capital invested has been largely augmented.

There was a marked increase in the salmon pack in the northern part of this district. The late run of salmon into Clayoquot Sound enabled the cannery at that point to almost double the pack of last year. The cannery in Barclay Sound put up a much larger pack, and the cannery at Quathiaska about doubled its pack. Many of the trap-nets on the west coast did not prove a success. This in some cases was largely due to unsuitable locations. A greater number of spring salmon were taken in the traps than in any previous year, and the growing demand for this fine fish enhances the value of trap-net fishing.

A greater number of dog salmon salteries were operated this season, and the demand for this salmon continues to increase in the markets of Japan.

The herring fishery has more than doubled, and is now in a fair way to become one of the most important branches of our fisheries in British Columbia. Nanaimo Harbour, the headquarters for this industry, presents during the fishing season a very busy scene.

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Nine firms operated on a large scale; while many engaged in the herring fishing in a less extensive way. The herring came in shoals in as great numbers as in previous years, and the fishermen reaped a rich harvest.

In view of the vast numbers taken in such a small area, and the shallowness of the water in the inner harbour, I would recommend that seining in this part of the harbour be prohibited.

The whaling station at Barclay Sound operated by the Pacific Whaling Co., had a very successful season. A number of valuable sperm whales were taken. The same Company is about completing another station at Kyuoquot Sound. The whaling steamer *St. Lawrence* has been purchased by the company to operate in connection with the new station.

The Victoria Sealing Co., despatched fourteen vessels to the Behring Sea, and all returned safely. Their catches were small. The high prices paid for skins induced a larger number of Indians to engage in the sealing along the west coast of Vancouver Island than last year.

It is gratifying that steps have been taken to equip a boat for patrol service between Vancouver Island and the mainland. A boat of this kind is an absolute necessity, and the work in which she will be engaged is of vital importance to the proper control of the fisheries in that part of my district.

I have the honour to be, sir,

Your obedient servant,

EDWARD G. TAYLOR,

Inspector of Fisheries.

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RECAPITULATION, DISTRICT No. 1, BRITISH COLUMBIA, 1906.

Kinds of Fish.	Quantity.	Price.	Value.
		\$ cts.	\$
Salmon, canned.....(48 lb. cases)	226,774	6 00	1,360,644
" salted.....brls.	1,000	10 00	10,000
" dry salted.....lb.	7,990,000	0 05	399,500
" dried (Ind. cons'n)....."	700,000	0 05	35,000
" smoked....."	100,000	0 10	10,000
" fresh and frozen....."	3,454,000	0 10	345,400
Sturgeon....."	25,000	0 10	2,500
Halibut....."	9,950,000	0 05	497,500
Herring, fresh and salted....."	60,000	0 05	3,000
" smoked....."	8,000	0 10	800
Oulachons, fresh....."	30,000	0 05	1,500
" salted.....brls.	70	10 00	700
" smoked.....lb.	1,200	0 10	120
Smelts....."	200,000	0 05	10,000
Trout....."	160,000	0 10	16,000
Cod....."	340,000	0 05	17,000
Shad....."	10,000	0 05	500
Mixed....."	80,000	0 05	4,000
Fish oil.....brls.	300	9 00	2,700
Guano.....tons.	140	25 50	3,570
Estimate of oysters, clams, crabs and other fish not included in above.			10,000
Total value			2,730,434

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CAPITAL INVESTED IN DISTRICT No. 1, BRITISH COLUMBIA
FISHERIES.

Description of Property.	Number.	Value.	Total.
		\$	\$
Canneries, wharfs, &c	36	1,011,000	
Steamers (including 8 chartered)	28	112,000	
" (halibut fishing)	5	280,000	
Dories and gear		23,500	
Boats	2,800	168,000	
Gill and seine nets (fathoms)	375,000	281,875	
Trawls and lines		5,000	
Scows	150	30,000	
Cold storage plants	3	135,000	
Oil factories	2	45,000	
Salteries	5	7,500	
Traps	1	1,500	
			2,100,375
EMPLOYEES IN FISHERIES.		Number.	Total.
Salmon fishermen		3,502	
On vessels (including 180 on halibut steamers)		260	
In canneries		2,590	
			6,352

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BRITISH COLUMBIA SALMON PACK, DISTRICT No. 1, 1906.

Name of Cannery.	Owners or Agents.	Sockeye.	Cohoos.	Springs.	Hump-backs.	Totals.
		Cases.	Cases.	Cases.	Cases.	Cases.
Terra Nova	B. C. Packers' Association.	56,076	4,195	783	1,578	62,632
Imperial						
Brunswick						
Currie McWilliams						
Ewen's						
British American	A. B. C. Packing Co	20,747	36	367	.....	21,150
Canoe Pass.....						
Phoenix						
Scottish Canadian.....	Malcolm, Cannon & Co....	14,851	1,366	.....	3,038	19,255
Richmond	J. H. Todd & Sons.....	6,600	2,600	4,500	.....	13,700
Canadian Canning Co .....	.....	19,050	.....	290	.....	19,340
Royal Packing Co .....	.....	7,154	2,669	383	.....	10,206
Burrard Canning Co.....	.....	4,077	920	1,397	133	6,527
Steveston Canning Co .....	.....	2,500	.....	.....	.....	2,500
George Wilson.....	.....	4,005	2,913	.....	.....	6,918
Great West Packing Co....	.....	3,865	45	139	.....	4,049
Gulf of Georgia	Lee Coy	1,667	.....	950	.....	2,617
B. C. Canning Co		9,395	3,593	359	.....	13,347
St. Mungo.....	.....	12,094	4,412	.....	1,204	17,710
Unique Canning Co .....	.....	3,440	3,390	1,300	2,690	10,820
Peter Birrell .....	.....	2,876	.....	.....	.....	2,876
Northern Canning Co .....	.....	4,975	857	.....	.....	5,832
J. J. Mulhall	4,625	1,800	55	6,480
Nye Canning Co.....	790	25	815
		178,787	28,821	10,523	8,643	226,774

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BRITISH COLUMBIA SALMON PACK, 1906—(CASES)—DISTRICT No. 2.

Name of Cannery.	Location.	Sockeye, 48 lb. cases.	Cohoe, 48 lb. cases.	Spring, 48 lb. cases.	Hump- back, 48 lb. cases.	Cannery Totals.	District Totals.
		Cases.	Cases.	Cases.	Cases.	Cases.	Cases.
Balmoral.....	Skeena	14,254	3,752	4,681	7,538	30,225	
Cunningham.....							
British American...		14,321	2,385	3,863	5,807	26,376	
North Pacific.....							
Dominion.....		6,356	1,096	58	4,501	12,011	
Inverness.....		7,820	1,100	1,560	3,200	13,680	
Oceanic.....		10,218	1,981	3,969	3,123	19,291	
Claxton.....		11,439	2,046	2,184	4,043	19,712	
Skeena River Com...		4,806	890	367	2,541	8,604	
Cassiar.....	"	5,543	1,575	1,198	4,204	12,520	
Alexander.....	"	1,986	400	698		3,084	
Carlisle.....	"	7,651	714	1,196	3,175	12,736	
Village Island.....	"	2,000	958	364	859	4,181	
Totals.....		86,394	16,897	20,138	38,991	162,420	162,420
Brunswick.....	Rivers Inlet ...	40,067		57		40,124	
Wadhams.....							
Good Hope.....		14,963	66	33		15,062	
Rivers Inlet.....		19,760				19,760	
Beaver.....		18,100				18,100	
Strathcona.....		14,629		28		14,657	
Kildela.....	"	15,112		63		15,175	
Totals.....		122,631	66	181		122,878	122,878
Naas Harbour.....	Naas.....	10,203	2,161	318	1,342	14,024	
Mill Bay.....							
Arrandale.....		4,657	2,248	249	2,108	9,262	
Port Nelson.....		7,306	1,588	354		9,248	
Totals.....		22,166	5,997	921	3,450	32,534	32,534
Lowe Inlet.....	North Coast ...	5,249	1,588		1,087	7,924	
Kimsguit.....							
Namu.....		11,783	1,848	27	1,573	15,231	
Bella Coola.....		5,299	4,879	1,010		11,188	
Smith's Inlet.....		10,000				10,000	
Totals.....		32,331	8,315	1,037	2,660	44,343	44,343
Skeena.....		86,394	16,897	20,138	38,991	162,420	
Rivers Inlet.....		122,631	66	181		122,878	
Naas.....		22,166	5,997	921	3,450	32,534	
North Coast.....		32,331	8,315	1,037	2,660	44,343	
Totals of each variety		263,522	31,275	22,277	45,101	362,175	

Grand Total..... 362,175 cases.

BRITISH COLUMBIA FISHERIES, 1906—DISTRICT No. 2.

Number.	VESSELS, BOATS, &c.						FISHING MATERIALS.				KINDS AND QUANTITIES OF FISH AND FISH PRODUCTS.				Number.
	Vessels.		Boats.		Gill-nets.		Seines.		Trawl Lines.		Salmon (\$6), cases.	Salmon, salt, brs.	Salmon, dry-salt, lb.	Salmon, smoked, lb.	
	Gross tons.	Value.	Men.	Number.	Value.	Men.	Value.	Fathoms.	Value.	Fathoms.	Value.				
1 Skeena.....	16	60,000	59	900	95,500	3,142	209,600	102,860	\$	450	1,000	\$	200,000	50,000	1
2 Rivers Inlet	7	35,000	34	820	35,605	2,300	155,600	75,000				80	450,000	2,000	2
3 Naas	3	3,950	9	176	17,640	744	66,000	34,147		100	400		80,000	70,000	3
4 North Coast.....	11	26,500	33	165	6,390	717	32,320	13,200	8,000	2,200	5,900	500	100,000	60,000	4
5 Queen Charlotte Islands	2	3,000	8	18	2,000	80			12,000			500	100,000		5
Total	39	128,450	143	2,079	157,135	6,983	463,520	225,207	20,000	2,750	7,300	1,180	930,000	182,000	
Values.....												11,800	46,500	18,200	

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BRITISH COLUMBIA FISHERIES, 1906—DISTRICT NO. 2—Continued.

KINDS AND QUANTITIES OF FISH AND FISH PRODUCTS.														
District No. 2.	Number.													
	Salmon, fresh, lb.	Salmon (frozen), lb.	Salmon in tierces, mild, cured.	Halibut, lb.	Herring, salt and fresh, lb.	Herring, smoked, lb.	Oulachon, fresh, lb.	Oulachon, salt, btl.	Oulachon, smoked, lb.	Trout, lb.	Mixed, lb.	Hair seal, lb.	Fish oil, gall.	Canned clams, case.
1 Skeena.	156,389	673,491	650	500,000	5,000	3,000	12,000	90	1,000	7,000	9,000	400	1,200	
2 Rivers Inlet.	20,000			4,000	10,000					2,000	3,000	500	400	
3 Naas	10,000		307	100,000	6,000	1,000	500,000	1,500	2,000	1,000	5,000	300	800	
4 North Coast	8,000			80,000	90,000			120	2,800	9,000	12,000	500	9,000	
5 Queen Charlotte Islands.	100,000			170,000	50,000	7,000				3,000	50,000	400	16,450	300
Total.	294,389	673,491	957	854,000	161,000	11,000	512,000	1,710	5,800	22,000	79,000	2,100	27,850	300
Values.	29,439	35,635	61,858	42,700	8,050	1,100	25,600	17,100	580	2,200	3,950	525	9,747	1,440
* Including all cannery employees.														100,000
Estimate of fish not included in above.														2,589,474
Grand total.														

* Including all cannery employees.

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RECAPITULATION

OF Yield and Value of Fisheries in District No. 2, **British Columbia**, for Year 1906.

Kinds of Fish.	Quantity.	Price.	Value.
		\$ cts.	\$
Salmon, canned.....48 lb. cases	362,175	6 00	2,173,050
" salted.....brls.	1,180	10 00	11,800
" dry salted.....lb.	930,000	0 05	46,500
" smoked....."	182,000	0 10	18,200
" fresh....."	294,389	0 10	29,439
" frozen....."	673,491	0 05	35,635
" mild cured.....tierces	957		61,858
Halibut.....lb.	854,000	0 05	42,700
Herring, fresh and salted....."	161,000	0 05	8,050
" smoked....."	11,000	0 10	1,100
Oulachon, fresh....."	512,000	0 05	25,600
" salted.....brls.	1,710	10 00	17,100
" smoked.....lb.	5,800	0 10	580
Trout....."	22,000	0 10	2,200
Mixed....."	7,900	0 05	3,950
Hair seal.....skins	2,100	0 25	525
Fish oil.....galls.	27,850	0 35	9,747
Canned clams.....cases	300	4 80	1,440
Estimate of fish not included in above.....			100,000
			2,589,474

FISHERIES Capital invested in **British Columbia**, District No. 2, 1906.

Description of Property.	Number.	Value.
		\$
<i>Fisheries—</i>		
Canneries, wharfs, &c.....	37	647,500
Vessels.....	39	128,450
Boats, scows, camp scows.....	2,079	157,135
Gill and seine nets (fathoms).....	463,520	225,207
Trawls and lines.....		1,000
Oil factories.....	2	8,000
Salteries.....	6	24,000
Total capital.....		1,191,292
<i>Employees in fisheries—</i>		
Fishermen and cannery workers.....	6,983	
Employed in vessels.....	143	
Total.....	7,126	

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BRITISH COLUMBIA—DISTRICT No. 3.

RETURN showing the Number and Value of Vessels and Boats, Nets, &c., also the Kinds of Fish caught in British Columbia for the Year 1906.

DISTRICTS.	VESSELS AND BOATS.				FISHING MATERIALS.						KINDS OF FISH.							
	Vessels.		Boats.		Gill-nets.		Seines.		Trap-nets.		Lines.	Salmon, canned cases,	Salmon, dry-salted, lb.	Salmon, smoked, lb.	Salmon, fresh, lb.	Halibut, fresh, lb.	Number.	
	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.	Fathoms.	Value.	Number.								Value.
1 Nanaimo.....	6	24,500	23	104	6,240	230	5,600	4,480	4,400	6,600	.....	.....	492,000	49,600	223,400	132,800	1
2 Cowichan.....	1	4,000	5	34	2,040	68	1,760	1,408	800	1,200	.....	.....	275,500	32,900	195,000	127,500	2
3 Victoria.....	17	22,800	54	39	2,340	88	1,950	1,560	500	750	40	3,400	13,712	19,800	234,000	158,900	3	
4 Clayoquot.....	2	15,000	11	41	2,460	104	3,150	2,520	2,800	4,200	.....	.....	1,450,000	12,900	25,600	35,800	4
5 Alberni.....	2	14,500	9	44	2,640	142	3,340	2,672	2,300	3,450	3	625	8,210	9,700	29,000	24,000	5	
6 Albert Bay.....	2	6,500	8	30	1,800	61	1,850	1,480	800	1,200	.....	475	7,388	2,300	5,900	15,200	6
7 Quathiaska.....	1	3,500	5	21	1,260	72	1,340	1,072	2,500	3,750	.....	400	4,182	.....	5,000	2,100	7
8 Comox.....	1	4,000	4	18	1,080	59	1,050	840	1,500	2,750	.....	.....	79,400	3,900	6,800	91,600	8
9 West Coast, Mainland.....	4	5,500	7	32	1,920	81	950	760	4,600	6,900	.....	.....	512,700	9,800	10,500	24,800	9
Totals.....	36	100,300	126	363	21,780	905	20,990	16,792	20,200	30,800	43	430,000	4,570,700	143,900	784,600	612,700		
Values.....													228,985	14,390	73,460	30,635		

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RECAPITULATION

Of the Yield and Value of the Fisheries of District No. 3, British Columbia.

Kinds of Fish.	Quantity.	Price.	Value.
		\$ cts.	\$
Salmon, canned.....48 lb. Cases.	40,511	6 00	243,066
" dry salted.....Lb.	4,561,700	0 05	228,985
" smoked....."	143,900	0 10	14,390
" fresh....."	734,600	0 10	73,460
Halibut, fresh....."	612,700	0 05	30,635
Herring, fresh and salted....."	8,704,000	0 05	435,200
" smoked....."	168,900	0 10	16,890
Smelts....."	212,500	0 05	10,625
Oulachon, fresh and salted....."	5,560	0 05	278
Trout....."	302,900	0 10	30,290
Cod....."	371,000	0 06	22,260
Mixed fish....."	378,500	0 05	18,925
Hair seal skins.....No.	3,500	0 75	2,625
Fish oil.....Galls.	89,700	0 35	31,395
Clams.....Sacks, 125 lb. each.	8,380	1 00	8,380
Oysters....."	1,450	3 50	5,075
Crabs.....Doz.	3,850	0 50	1,925
Products of Seshart whaling station.....			92,911
Shrimps and prawns.....			2,250
Abelonies and mussels.....			2,500
Estimate of fish not included above.....			95,150
Fur seal skins.....No.	10,368	30 50	316,224
Total.....			1,683,439

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STATEMENT of the Capital invested in District No. 3, British Columbia Fisheries, 1906.

Description of Property.	Number.	Values.	Totals.
		\$	\$
Canneries, wharfs, &c		98,500	
Vessels	36	100,300	
Boats	363	21,780	
Gill and seine-nets (fathoms).....	40,990	47,592	
Trap-nets and traps.	43	430,000	
Lines		8,725	
Whaling station, plant and wharfs.....	1	125,196	
Salteries.....	18	45,000	
Scows.....	36	16,200	
Oil factories and barges.....	3	13,000	
			906,293
Fur sealing—			
Vessels	37	370,000	
Boats and canoes.....		5,800	
Guns and equipment.....		17,800	
			393,600
Capital total.....			1,299,893

Employees in Fisheries.	Number.	Totals.
Fishermen and cannery employees.....	1,590	
On vessels.....	126	
		1,716
Sailors and hunters in fur sealing—		
White men.....	180	
Indians	161	
		341
Total.....		2,057

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BRITISH COLUMBIA SEALING REPORT, 1906.

Number.	Vessels.	License No.	Masters.	Tons	CREWS.		Boats.	Canoes.	B. C. COAST CATCH.		CATCH OUTSIDE AREA OF AWARD.		EASTERN BEHRING SEA CATCH.		Totals.	Branded skins.	Otter skins.
					Whites.	Indians.			Males.	Females.	Males.	Females.	Males.	Females.			
1	Allie I. Alger.	7	D. G. Macaulley.	75	8	10	2	5	51	42			143	172	408		
2	Carrie C. W.	16	J. G. Searle.	92	8	26	2	13					254	274	528		
3	Carlotta G. Cox.	5	John Christian.	76	21		6		165	188	89	196	23	42	703		
4	Casco	1	W. Munro.	63	21		6		196	167	131	127	86	102	809		12
5	City of San Diego.	2	A. C. Folger.	46	18		6		105	67	151	44	23	22	412		1
6	Diana.	3	A. B. Whidden.	50	18		6		122	230	133	155	77	117	834		
7	Ottia.	17	W. D. Byers.	86	8	24	2	12					267	315	582	25	
8	Dora Seward.	13	R. E. McKid.	94	7	25	2	13	2	7			188	183	380	1	
9	Markland	12	Geo. Heater.	99	8	31	2	15					293	398	691	6	
10	Fawn		Lost at sea.														
11	Ida Etta	15	H. F. Brown.	69	6	11	2	6					84	119	203		
12	Libbie.	11	W. Heater.	93	8	24	2	12	39	21			319	213	592		
13	Vera.	6	A. St. Clair.	60	21		6		138	119	154	133	42	34	620		
14	Victoria	14	R. M. Balcom.	63	21		6		50	27	104	64	70	44	359		
15	Zellah May.	8	W. Delouchrey	66	7	10	2	5	42	50	1,126	1,032	118	89	2,158		
16	E. B. Marvin.																
				1,032	180	161	52	81	910	918	1,888	1,751	1,987	2,124	9,578	32	13
Indian catch (by individual Indians in canoes along the coast).....																790	
Total catch of Canadian vessels.....																10,368	

SUMMARY.

British Columbia coast catch.....	2,618
Catch outside area of award.....	3,639
Eastern Behring sea catch (vicinity of Pribyloff islands).....	4,11
Total.....	10,368

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RECAPITULATION

Of the Yield and Value of Fisheries in all **British Columbia**, for the Year 1906.

Kinds of Fish.	Quantity.	Price.	Value.	Total.
		\$ cts.	\$	\$
Salmon, canned 48 lb. cases.	629,460	6 00	3,776,760	
" fresh or frozen Lb.	5,156,480	0 05	483,934	
" smoked "	425,900	0 10	42,590	
" dry salted "	14,503,252	0 05	771,843	
" pickled Brls.	2,180	10 00	21,800	
Halibut Lb.	11,416,700	0 05		5,096,927
Herring, salted and fresh "	8,934,000	0 05	446,250	570,835
" smoked "	187,900	0 10	18,790	
Oulachons, fresh "	547,560	0 05	27,378	465,040
" smoked "	7,000	0 10	700	
" salted Brls.	1,780	10 00	17,800	
Smelts Lb.	412,500	0 05		45,878
Trout "	484,900	0 10		20,625
Cod "	711,000	0 05		48,490
Shad "	10,000	0 05		39,200
Sturgeon "	25,000	0 10		500
Mixed fish "	466,400			2,500
Oysters Sacks.	1,450	3 50		26,875
Clams "				5,075
Mussels, crabs, shrimps, &c. "				9,820
Estimate of fish not included above. "				6,675
Fish oil Galls.	125,265			298,061
" guano Tons.	140	25 50		43,842
Fur seal skins No.	10,368	30 50		3,570
Hair " "	5,600			316,224
Total, 1906				3,150
" 1905				7,003,347
Decrease				9,850,216
				2,846,869

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RECAPITULATION

OF the Capital invested in the Fisheries of the whole of British Columbia, 1906.

Articles.	Number.	Value.	Total.
		\$	\$
Fishing vessels and steamers.....	108	620,750	
" " boats.....	5,242	346,915	
" dories.....		23,500	991,165
Fathom of gill-nets and seines.	879,510	554,674	
Trawls and lines.....		14,725	
Trap-nets.....	44	431,500	1,000,899
Salmon canneries, wharfs, &c.	77	1,757,000	
Salteries for fish.	29	76,500	
Oil factories.	7	66,000	
Cold storage for fish.....	3	135,000	
Fishing scows.....	186	46,200	
Whaling station	1	125,196	2,205,896
<i>Fur Sealing Fleet.</i>			
Vessels.....	37	370,000	
Boats.....		5,800	
Equipment.....		17,800	393,600
Total			4,591,560

EMPLOYEES IN FISHING INDUSTRY.

Men.	Number.	Total.
In vessels.....	529	
In fishing boats and in canneries.....	14,665	15,194
Seal hunters—		
Whitemen	180	
Indians	161	341
Total.		15,535

APPENDIX No. II

FISH-BREEDING; 1907.

REPORT BY PROFESSOR EDWARD E. PRINCE, COMMISSIONER AND
GENERAL INSPECTOR OF FISHERIES FOR THE
DOMINION OF CANADA.

To the Honourable L. P. BRODEUR,
Minister of Marine and Fisheries,
Ottawa.

SIR,—In presenting my annual report upon the hatcheries and fish-breeding operations carried on under the auspices of the Dominion government I feel special satisfaction in stating that the growth of these operations has continued during the past twelve months and whereas in my last report there were thirty hatcheries engaged in the work of fish-culture, there were during the season of 1906-7 thirty-four hatcheries at work. In addition to these several new hatchery buildings were commenced, and are now in a more or less advanced state. The rapidly developing fisheries of the province of British Columbia rendered especially urgent the construction of new Pacific hatcheries. The necessity of these institutions was prominently laid before the government in the reports already submitted by the British Columbia Fisheries Commission, of which commission I had the honour of being appointed chairman, and important bodies, such as the boards of trade in various Pacific cities, fish canners' associations, fishermen's societies, &c., have united in making similar representations. Public opinion is, indeed, favourable in the highest degree to the expansion of artificial fish-breeding in its various branches, and the federal government has not been slow to recognize the desirability of extending hatchery operations.

The opinion prevails that hatcheries should be located near the natural breeding grounds of important food fishes, and while this is desirable and in many ways advantageous, yet it is not essential, as I pointed out in former reports. Some of the most successful hatcheries have been located very distant from the natural spawning areas, and the eggs have been shipped, in many instances, long distances, but the fry when hatched out were, as a value, more readily distributed over wide areas, and benefit accrued to more extensive water areas than would have been possible from hatcheries in isolated places or locations far removed from coach and rail communication. In British Columbia the difficulties in the way of building and operating such hatcheries are exceptionally great, as the breeding grounds of the most valuable kinds of salmon and trout are in remote unsettled regions, and often on almost inaccessible lakes and tributaries hidden away in wild mountainous regions. The initial cost of building such hatcheries is very considerable, while to operate them is also costly and often very difficult owing to the obstacles to transportation of supplies, &c. These difficulties have not deterred the department, and the Rivers inlet and Lake Lakelse hatcheries in British Columbia are evidence of the policy of the Dominion government to adopt the most effective measures for perpetuating the kinds of salmon and other fish upon which important fishing industries depend.

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A deputation, representing the canners' and the fishermen's interests on the Pacific coast, which waited upon the Honourable the Minister in March last laid special stress upon the immediate erection of no less than four new salmon hatcheries in British Columbia, and the enlargement of the capacity of a fifth hatchery. Of the ten separate requests urged upon the attention of the Honourable L. P. Brodeur, and supported by the Honourable William Templemen, the proposal respecting hatcheries was placed first, and it was recommended that fish-breeding establishments be built on Stuart lake, on the headwaters of the Fraser river; on Nechacco river, Fraser lake, about fifty miles south of Stuart lake; Quesnelle lake, and on Babine lake, at the source of the Skeena river. The capacity of the Lakelse Hatchery, it was pointed out, might be increased to ten million of salmon eggs, and the proposed Stuart lake, Nechacco river and Quesnelle lake hatcheries be of the same capacity. Additional hatcheries have been also pressed on the attention of the government to be erected on the Cowichan river, east side of Vancouver island, and on the west side of the island at Alberni or on some of the interior lakes where most favourable conditions exist. Sites have been examined and reported upon; but, in reference to the Cowichan hatchery, it may be pointed out that a British Columbia firm whose application for fishing privileges in Cowichan bay has been favoured by the department undertook to include as one of the conditions of a fishery lease the erection and operation of a salmon and trout hatchery. The work of such a hatchery would be under strict government control and supervision. The important Babine Lake hatchery scheme has been pushed on with such vigour that the building is now completed and operations will be commenced this season, and all interested in the great Skeena river salmon fisheries, including the resident Indian tribes, are looking with confidence to great benefits in the near future resulting from the increased supply of young salmon in the more remote upper waters of this northern river. While some of the British Columbia hatcheries found during the past season that the shortage of parent salmon prevented the securing of full supplies of spawn from the accustomed breeding grounds, others, like the Rivers inlet and Birkenhead river or Lillooet hatcheries experienced no difficulty in obtaining ample quantities of salmon eggs, indeed, so well supplied were the breeding grounds with schools of parent fish that twice or thrice the quantity of ova needed could have been secured without difficulty.

On the great lakes a new hatchery has been erected at Wiarton and is in operation for the first time this season, and it is expected it will be the means of filling a long felt want in that locality.

The lobster hatcheries, five in number, have again operated most satisfactorily, and the total number of young lobsters planted as no less than 500 millions.

During the season of 1907 a grand total of no less than 813,979,350 fry of various kinds of fresh water and marine fishes were planted from the Dominion government hatcheries.

The table which follows shows the various species of fish and the total number of each kind respectively hatched and successfully planted from the different establishments operated by the department during the year.

Atlantic salmon (<i>Salmo salar</i>).. . . .	12,800,000
B. C. salmon.. . . .	54,475,350
Speckled trout (<i>Salvelinus fontinalis</i>).. . . .	863,000
Salmon trout (<i>Salvelinus namaycush</i>).. . . .	3,476,000
Grey trout (<i>Cristivomer namaycush</i>).. . . .	840,000
Pickrel or Doré (<i>Stizostedion vitreum</i>).. . . .	41,500,000
Lake whitefish (<i>Coregonus clupeiformis</i>).. . . .	199,025,000
Lobster (<i>Homarus americanus</i>).. . . .	501,000,000

Total.. . . . 813,979,350

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For facility of reference the detailed table below specifies the name and location of each hatchery, also the quantities of young fish and of eggs in an advanced condition supplied by each establishment respectively, and the species of fry or the kind of eggs so distributed during the season.

The lobster pounds near Gabarouse were again in operation, under an arrangement with Mr. H. E. Baker, who has most enthusiastically carried out the work, under departmental supervision and inspection. The total number of seed lobsters, *i.e.*, lobsters carrying berries or eggs replaced in the coast waters off Cape Breton county, N.S., was 43,905, and all who have followed this planting of adult female lobsters during the last years at government expense are sanguine of great benefit to the valuable lobster industry of eastern Nova Scotia.

The breeding of black bass in the inclosed ponds near Belleville, Ontario, has been continued during the season, and from the adult specimens of this fine game fish, numerous fingerlings or advanced fry were reared and distributed in suitable waters in the province of Ontario.

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QUANTITIES OF FRY DISTRIBUTED.

The following table shows the number of various species of fish turned out from the Dominion hatcheries:—

Number.	Name of Hatchery.	Number of Fry distributed.	Number of Eggs sent to other Hatcheries.	Species of fish.
1	Ottawa, Ont	877,000	292,000	Salmon Trout.
	"	525,000		Whitefish.
	"	95,000		Atlantic Salmon.
	"	55,000		Speckled Trout.
2	Newcastle, Ont	1,807,000		Salmon Trout.
3	Sandwich, Ont	61,500,000		Whitefish.
	"	41,500,000		Pickeral.
4	Gaspé, P.Q.	1,175,000		Atlantic Salmon.
5	Tadousac, P.Q.	3,360,000	500,000	" "
6	Lac Tremblant, P.Q.	642,000		Salmon Trout.
7	St. Alexis, P.Q.	670,000	300,000	Speckled Trout.
8	Magog, P.Q.	150,000		Salmon Trout.
	"	105,000	155,000	Speckled Trout.
	"	840,000		Gray Trout.
	"	115,000		Atlantic Salmon.
9	Bedford, N.S.	440,000		" "
	"	33,000		Speckled Trout.
10	Margaree, N.S.	925,000		Atlantic Salmon.
11	Windsor, N.S.	721,000		" "
12	Bay View, N.S.	155,000,000		Lobsters.
13	Causo, N.S.	60,000,000		" "
14	Miramichi, N.B.	1,670,000		Atlantic Salmon.
15	Restigouche, N.B.	2,139,000		" "
16	Grand Falls, N.B.	1,365,000		Atlantic Salmon.
17	Shemogue, N.B.	126,000,000		Lobsters.
18	Shippigan, N.B.	80,000,000		" "
19	Charlottetown, P.E.I.	80,000,000		" "
20	Kelly's Pond, P.E.I.	790,000		Atlantic Salmon.
*21	Selkirk, Man.	45,000,000		Whitefish.
*22	Berens River, Man.	92,000,000		" "
23	Fraser River, B.C.	5,500,000		B. C. Salmon.
24	Granite Creek, B.C.	6,858,000		" "
25	Skeena River, B.C.	4,125,750		" "
26	Harrison Lake, B.C.	14,724,600		" "
27	Nimkish, B.C.	4,870,000		" "
28	Pemberton, B.C.	10,820,000	8,000,000	" "
29	Rivers Inlet, B.C.	7,577,000		" "

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FISH-

Statement showing the places where and the years in which the Dominion fish establishment annually since the commencement

Number.	YEAR.	ONTARIO.			QUÉBEC.		
		Newcastle.	Sandwich.	Ottawa.	Magog.	Tadousac.	Gaspé.
		Fry.	Fry.	Fry.	Fry.	Fry.	Fry.
1	1868-73.....	1,070,000					
2	1874.....	350,000					
3	1875.....	650,000				60,000	110,000
4	1876.....	700,000	8,000,000			150,000	50,000
5	1877.....	1,300,000	8,000,000			1,180,000	1,051,000
6	1878.....	2,605,000	20,000,000			707,000	650,000
7	1879.....	2,602,700	12,000,000			1,250,000	1,597,000
8	1880.....	1,923,000	13,500,000			1,155,000	730,000
9	1881.....	3,300,000	16,000,000		200,000	334,000	500,000
10	1882.....	4,841,000	44,000,000		975,000	660,000	530,000
11	1883.....	6,053,000	72,000,000		250,000	995,000	520,000
12	1884.....	8,800,000	37,000,000		100,000	985,000	859,000
13	1885.....	5,700,000	68,000,000		300,000	720,000	290,000
14	1886.....	6,451,000	57,000,000		1,400,000	1,627,000	576,000
15	1887.....	5,130,000	56,500,000		675,000	900,000	630,000
16	1888.....	8,076,000	56,000,000		3,475,000	850,000	800,000
17	1889.....	5,846,500	21,000,000		2,800,000	1,600,000	450,000
18	1890.....	7,736,000	52,000,000	5,732,000	2,875,000	1,700,000	806,000
19	1891.....	7,807,500	75,000,000	7,043,000	3,050,000	1,300,000	1,000,000
20	1892.....	4,823,000	44,500,000	4,909,000	2,400,000	624,000	965,000
21	1893.....	9,835,000	68,000,000	6,208,000	3,600,000	2,060,000	910,000
22	1894.....	6,000,000	47,000,000	4,480,000	2,035,000	1,975,000	850,000
23	1895.....	6,000,000	73,000,000	3,210,000	3,350,000	2,060,000	675,000
24	1896.....	5,200,000	61,000,000	3,950,000	3,400,000	2,500,000	300,000
25	1897.....	4,200,000	72,000,000	4,100,000	4,500,000	3,272,000	1,100,000
26	1898.....	4,325,000	71,000,000	3,020,000	3,100,000	2,200,000	
27	1899.....	4,050,000	73,000,000	3,700,000	3,098,000	2,125,000	
28	1900.....	5,175,000	90,000,000	3,450,000	3,099,000	1,400,000	
29	1901.....	5,900,000	67,000,000	3,410,000	3,135,000	2,960,000	
30	1902.....	650,000	100,000,000	1,245,000	935,000	2,730,000	734,000
31	1903.....	2,500,000	90,000,000	1,201,000	885,000	1,625,000	830,000
32	1904.....	1,475,000	75,000,000	877,000	283,000	2,615,000	1,520,000
33	1905.....	1,480,000	106,000,000	1,103,000	1,098,000	1,550,000	1,100,000
34	1906.....	1,550,000	88,000,000	1,123,000	875,000	2,435,000	1,100,000
35	1907.....	1,807,000	103,000,000	1,552,000	1,210,000	3,360,000	1,175,000
	Total.....	145,911,700	1,844,500,000	60,313,000	53,103,000	51,634,000	22,408,000

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BREEDING.

hatcheries have been erected; also the number of fry distributed from each of operations, including the year 1907.

QUEBEC—Con.		NEW BRUNSWICK.					Number.
St. Alexis des Monts.	Mont- Tremblant.	Ristigouche.	Miramichi.	St. John River.	Lobster Hatchery, Shemogue.	Lobster Hatchery, Shippigan.	
Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	
		100,000	60,000				1
		600,000	150,000				2
		300,000	60,000				3
		600,000	320,000				4
		1,015,000	665,000				5
		1,470,000	1,025,000				6
		1,500,000	805,000	170,600			7
		740,000	770,000	50,000			8
		1,400,000	640,000	588,000			9
		300,000	925,000	72,600			10
		940,000	795,000	811,000			11
		660,000	900,000	155,000			12
		1,380,000	945,000	2,181,000			13
		1,500,000	900,000	2,479,000			14
		1,720,000	1,290,000	4,142,000			15
		1,280,000	850,000	3,570,000			16
		2,396,000	1,022,000	3,492,000			17
		1,750,000	1,503,000	3,165,000			18
		1,240,000	1,310,000	2,378,000			19
		833,000	975,000	3,299,000			20
		1,080,000	1,010,000	4,096,000			21
		2,885,000	1,200,000	4,060,000			22
		1,250,000	1,430,000	4,068,000			23
		2,100,000	1,558,000	4,155,000			24
		1,135,000	1,557,000	3,290,000			25
		2,025,000	1,605,000	3,980,000			26
		1,125,000	1,620,000	3,957,000			27
		1,750,000	1,800,000	3,605,000			28
		2,310,000	1,700,000	998,000			29
		2,052,000	1,000,000	648,000	17,000,000		30
125,000		2,525,000	1,500,000	909,000	52,000,000	50,000,000	31
298,000	570,000	2,333,000	1,400,000	807,000	100,000,000	100,000,000	32
493,000	555,000	1,620,000	1,650,000	1,350,000	122,000,000	70,000,000	33
670,000	642,000	2,139,000	1,675,000	1,365,000	126,000,600	80,000,000	34
							35
1,586,000	1,767,000	48,103,000	36,615,000	63,841,200	417,000,000	300,000,000	

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FISH-BREEDING.

STATEMENT showing the Places where and the Years in which the several Fish Hatcheries have been erected, &c.—*Continued.*

Number.	Year.	NOVA SCOTIA.						P. E. ISLAND.	
		Bedford.	Sydney.	Margaree.	Windsor.	Lobster Hatchery Bay View.	Canso.	Kelly's Pond.	Lobster Hatchery Charlottetown.
1	1868-73.								
2	1874.								
3	1875.								
4	1876.	395,000							
5	1877.	1,000,000							
6	1878.	1,400,000							
7	1879.	1,740,000							
8	1880.	730,000							
9	1881.	680,000							
10	1882.	850,000	315,000						
11	1883.	800,000	659,000						
12	1884.	1,000,000	853,000						
13	1885.	670,000	772,000						
14	1886.	950,000	1,179,000						
15	1887.	4,230,000	1,415,000						
16	1888.	4,390,000	1,559,000						
17	1889.	3,850,000	2,034,000						
18	1890.	3,860,000	1,953,000						
19	1891.	2,550,000	1,000,000						
20	1892.	2,620,000	690,000						
21	1893.	3,180,000							
22	1894.	3,805,000	288,000						
23	1895.	3,815,000	195,000						
24	1896.	4,225,000	243,500						
25	1897.	5,450,000	496,000						
26	1898.	3,000,000							
27	1899.	4,025,000							
28	1900.	3,970,000							
29	1901.	3,980,000							
30	1902.	960,000							
31	1903.	710,000		95,000					
32	1904.	1,213,000		600,000					
33	1905.	880,000		562,500					
34	1906.	1,071,000		799,500					
35	1907.	473,000		910,000					
				925,000					
	Total	72,472,000	13,651,500	3,892,000	1,296,000	2,044,300,000	139,000,000	1,510,000	336,085,000

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FISH-BREEDING.
 STATEMENT showing the Places where and the Years in which the several Fish Hatcheries have been erected, &c.—*Concluded.*

Number.	YEAR.	BRITISH COLUMBIA.						MANITOBA.		TOTAL.		
		Fraser River.	Harrison Lake.	Granite Creek, Sicamous.	L. Lakelse, Skeena River.	Pember-ton.	Rivers Inlet.	Nimpkish River.	Selkirk.		Berens River.	
		Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.		Fry.	
1	1868-73.....										Fry.	1,070,000
2	1874.....											510,000
3	1875.....											1,570,000
4	1876.....											9,655,000
5	1877.....											13,451,000
6	1878.....											27,042,000
7	1879.....											21,684,700
8	1880.....											21,013,600
9	1881.....											22,949,000
10	1882.....											55,799,000
11	1883.....											83,784,600
12	1884.....											53,143,000
13	1885.....	1,800,000										81,067,000
14	1886.....	2,625,000										76,714,000
15	1887.....	4,414,000										79,273,000
16	1888.....	5,807,000										88,109,000
17	1889.....	4,419,000										47,699,500
18	1890.....	6,640,000										90,212,000
19	1891.....	3,603,800										115,772,300
20	1892.....	6,000,000										135,959,000
21	1893.....	5,764,000										258,314,000
22	1894.....	7,800,000							14,500,000			254,919,000
23	1895.....	6,390,000							19,000,000			294,040,000
24	1896.....	10,393,000							4,500,000			202,459,000
25	1897.....	5,928,000										198,859,000
26	1898.....	5,850,000							9,000,000			192,477,000
27	1899.....	4,742,000							20,000,000			222,350,000
28	1900.....	6,200,000							32,000,000			271,996,000
29	1901.....											203,540,000
30	1902.....	9,214,000		6,760,000					23,000,000			271,301,000
31	1903.....	9,573,000		4,866,500	3,450,000			1,636,000	12,000,000			314,576,500
32	1904.....	6,584,000		3,074,000	4,000,000			2,496,000	31,500,000			473,298,500
33	1905.....	2,550,000	6,505,000	4,000,000	3,767,900			2,800,000	25,500,000			627,541,400
34	1906.....	9,130,000	28,773,000	10,888,000	3,784,000	17,450,000	8,000,000	4,873,400				637,925,400
35	1907.....	5,500,000	14,724,600	6,838,000	4,125,750	10,820,000	7,577,000	4,870,000	45,000,000	92,000,000		813,979,350
	Total.....	130,926,800	50,002,600	36,446,500	19,127,650	28,270,000	15,577,000	16,675,400	236,000,000	92,000,000	92,000,000	6,284,014,350

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The details of the work are summarized in the report of Mr. F. H. Cunningham, Superintendent of Fish Culture, which immediately follows my present report, while the full particulars of each hatchery's operations are given by the various officers in charge of hatcheries under the respective headings of the reports which follow.

IMPERIAL AND FOREIGN VISITORS, ETC.

The extent and the success of Canadian fish culture, as carried on during the last forty years, for the first twenty-five years under the superintendence for most of the time of the late Mr. Samuel Wilmot, and during the last twelve years (since 1894) under my responsible charge as Commissioner of Fisheries, have naturally excited interest in other parts of the British Empire, as well as in various foreign countries. Numerous inquiries are addressed to me or reach the department asking for information, and to meet that desire I prepared and published as a special report (Fisheries Report, 1905, p. xc.), a very condensed but sufficiently full and detailed account entitled 'Fish Culture in Canada.*' Officials of high rank have also interviewed me, and last June a specially interesting visit was made by a high official of India, the Honourable K. A. Gupta, of the Indian Civil Service, Calcutta, who obtained from me full information on the system of artificial fish-breeding carried on in Canada, with a view to inaugurating a system of fish culture in the great presidency of Bengal with its teeming millions of Hindu natives. Mr. Gupta visited Europe and the United States but he has written to me stating that he values especially the extensive information which I afforded him on his visit to Canada.

Recently Sir F. A. Nicholson, K.C.I.E., well known as a high official in the Imperial service of the Madras Presidency, India, has sought information from me on our hatching methods in Canada as the Madras authorities contemplate some extensive operations with a view to the improving of the fishery resources of that country. Amongst other visitors to the Dominion who evinced special interest in lobster hatcheries and other departments of Canadian fish hatchery work were Commissioner John W. Delano, of the Fish, Game and Forestry Commission of Massachusetts, and Dr. George W. Field, a distinguished official of the same commission.

FISH COMMISSION AND HATCHERIES.

The two important fishery commissions which for the past two seasons have been investigating respectively the fisheries of British Columbia, and the inland fisheries of Georgian bay and western Ontario generally, have given prominence to the question of hatcheries and fish-breeding, and in the reports about to be presented for the consideration of the Dominion government their conclusions and recommendations will be of importance in regard to the future development and working of the federal hatcheries in the provinces referred to. I shall not therefore deal in my present report with some recent changes in the methods of fish culture adopted in other countries but treat them fully in a future report.

SERVICES OF EXPERIENCED OFFICERS.

I have only to add that I have visited and inspected quite a number of western and eastern hatcheries operated by this department and I am pleased to make reference to the intelligence, zeal and skill of the hatchery officials generally. Without such zealous and able officers successful fish culture would be impossible. Some of the officers have been in the service since fish hatching was inaugurated as a branch of the departmental work, and the system to-day owes much to the rare experience and sagacious enthusiasm of these veterans in Canadian fish culture.

I have the honour to be, sir,

Your obedient servant, ,

EDWARD E. PRINCE,

Dominion Commissioner of Fisheries.

* A reprint, much extended of my address to the Literary and Scientific Society of Ottawa, on the subject of Canadian Fish Culture.

ANNEX A.

OTTAWA, October 15, 1907.

Prof. E. E. PRINCE,

Dominion Commissioner of Fisheries.

Ottawa.

SIR,—I beg to submit the following report on the operations conducted at Dominion fish breeding establishments during the past year.

It will be noticed that this service is being extended to all parts of the Dominion, as it is considered by practical fishermen the only means of keeping up and increasing the supply of food fish in Canadian waters.

At the present time there are hatcheries in operation at following points:—

British Columbia—

Bon Accord, Fraser River.

Harrison Lake.

Pemberton.

Granite Creek.

Lakelse Lake, Skeena River.

Rivers Inlet.

Babine Lake.

Stuart Lake.

Nimpkish.

Manitoba—

Selkirk.

Berens River.

Ontario—

Sandwich.

Ottawa.

Newcastle.

Wiarton.

Quinté.

Quebec—

Magog.

Mont Tremblant.

St. Alexis des Monts.

Lake Lester.

Tadousac.

Gaspé.

New Brunswick—

Restigouche.

Grand Falls, St. John River

Miramichi.

Shippigan.

Shemogue.

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Nova Scotia—

Bedford.
Windsor.
Margaree.
Bay View.
Canso.

Prince Edward Island—

Kelly's Pond, Southport.
Blockhouse Point, Charlottetown Harbour.

HATCHERY SITES.

The selection of a suitable site is the initial and most important factor of the work. Not only must a supply of pure water be available at all times, but the spawning grounds should be within a reasonable distance of the location. Whilst this remark refers generally, it is perhaps more applicable to British Columbia where it is found that the Pacific salmon will not survive in confinement to the same extent as the Atlantic salmon, hence it becomes necessary that the locations for hatcheries on the Pacific coast must be nearer the spawning grounds than is actually necessary in the east, which means the erection of hatcheries far up the streams, and as very often happens in isolated places, hard to reach and expensive to maintain. The question arises, why not locate the hatcheries in more convenient places and transport the eggs and fry to and from such points. This could be done providing navigation would allow; but unfortunately for the system in British Columbia the streams are so rapid that the reaching of even the spawning beds nearest the mouths of the rivers would be a very expensive and hazardous undertaking.

Hence it became necessary when locating additional hatcheries in this province to go as far up the Skeena river as Babine and Stuart lakes to reach the natural spawning beds, at which points it is expected the hatcheries located there, which are now in operation, can be filled with eggs every year.

RETAINING PONDS.

The retaining pond for parent salmon in Little river, St. John, N.B., was successful last year and eggs were procured from the salmon inclosed therein for most of the hatcheries in the maritime provinces, from which establishments a successful distribution of healthy fry resulted. It might be of interest to state that a large percentage of salmon tagged and released from this pond in the fall of 1904 were again captured in the St. John river in the spring of 1906.

REARING PONDS.

The question of retaining fry until they have reached an age from three to six months is an important matter. The young fry are protected both from climatic conditions and from their natural enemies.

This system is being extended as facilities offer and the appropriation at the disposal of the department for this service will permit. At the Pemberton hatchery in British Columbia this system is being most successfully conducted.

The rearing ponds at Lake Lester, in the province of Quebec, are most satisfactory and the fishing in the lakes in which fingerlings have been planted is reported to have wonderfully improved.

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DISTRIBUTING FRY.

In my report of last year, reference was made to the stocking of lakes by localities instead of planting small quantities of fry over widely scattered areas. This suggestion has been followed to a small extent, but the system of 'Applications for Fry' makes it difficult to be carried out as fully as could be wished; but it is again strongly recommended that this system of distributing be extended as occasion offers.

Reference must be made to the impossibility of supplying applications for speckled trout fry. It is not possible to secure eggs from this species in large quantities, and the planting of these fry should be limited to only such public waters as have been entirely depleted.

In this connection it may be mentioned as an instance of the success attending this work that Atlantic salmon weighing as much as seven pounds are reported to have been captured in the Cowichan river, B.C., and black bass of four pounds in weight have been taken in Langford lake, B.C. It has also been reported that the bass are doing well in Florence lake. These fish are the result of a small shipment of salmon made to these waters a few years ago and the bass were planted in 1904. The Atlantic salmon have also done exceedingly well in Lakes Memphremagog and Charleston and in the last named lake fish of seven pounds weight have been captured.

BRITISH COLUMBIA.

Fraser River Hatchery.

This hatchery last year gave good results and over five millions of fry were distributed. A shipment of sockeye fry was made to the rivers on the west coast of Vancouver island from this establishment in addition to the Atlantic salmon that were hatched from eggs sent from the east.

Harrison Lake Hatchery.

This large establishment had an output of close to fifteen millions of fry last season. The collection of the ova was attended with great difficulty owing to the freshets which washed out the fences and allowed a large number of fish to escape after they had been penned.

Pemberton Hatchery.

The same difficulty was experienced in this establishment as at the Harrison lake hatchery with regard to the high water in the rivers allowing the fish to escape and in some cases washing out the fences; but in spite of all a large number of eggs were secured and a distribution of about eleven millions of fry was accomplished after eight million eggs had been sent to other hatcheries.

Granite Creek Hatchery.

The distribution from this establishment amounted to almost seven million fry which were successfully liberated in good condition. The good work of this hatchery is quite apparent as salmon were last year taken in streams in which they had never before been seen.

Skeena River Hatchery.

This hatchery was last year filled to its utmost capacity and experienced one of its most successful years since it was first established, liberating over four million fry in splendid condition.

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Rivers Inlet Hatchery.

The output of fry from this hatchery was over seven and a half million, the same difficulty being experienced as at some of the other hatcheries on account of the high water which either destroyed the fences or overflowed them to such an extent that the fish escaped.

Nimkish Hatchery.

This establishment is operated by the Alert Bay Canning Company, B. C. Parker's Association, and last year its operations resulted in the liberation of nearly five millions of fry.

MANITOBA.

The two whitefish hatcheries of this province, located at Selkirk and Berens river, were last year successfully operated and last spring one hundred and thirty-seven millions of strong healthy fry were liberated in the waters of Lake Winnipeg. The ova for these establishments is secured from fish captured in pound nets operated at Little Saskatchewan, Berens river and Pigeon bay.

ONTARIO.

Sandwich Hatchery.

This establishment is devoted to the handling of whitefish and pickerel, and last year over one hundred million fry were successfully distributed. For the first time a quantity of the whitefish ova were taken in the Bay of Quinté.

Ottawa Hatchery.

The operations at this hatchery were last year as usual very successful and a very large percentage of the eggs laid down in the troughs were hatched and distributed in good condition. The large district covered makes the distribution of fry a very arduous undertaking.

Newcastle Hatchery.

The operations at this establishment were last year attended with the usual success, and in addition to the salmon trout fry and yearlings a number of black bass were successfully raised and distributed.

Bass Ponds, Bay of Quinté.

The ponds at this point experienced one of the most successful years since their establishment and a larger number of bass fingerlings and a small quantity of yearlings have this year been successfully distributed.

QUEBEC.

Magog Hatchery.

This hatchery was again filled to a large extent with the eggs of grey trout taken in Lake Memphremagog. In addition a quantity of salmon trout, speckled trout and Atlantic salmon were successfully handled.

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Lac Tremblant Hatchery.

This hatchery is devoted largely to the incubation of salmon trout but a small quantity of Atlantic salmon and speckled trout eggs are also handled. Last season's operations were very successful and the fry were distributed in splendid condition.

St. Alexis Hatchery.

This hatchery is devoted almost entirely to the hatching of speckled and marstoni trout. The supply of eggs is secured by the officer-in-charge from fish taken in the lakes of that district and owing to the nature of the country, this is a work that is attended with much difficulty.

Lake Lester Rearing Ponds.

The operations at this establishment have again been attended with success, and the good results attending the distribution of fingerlings are quite apparent in the waters of that vicinity.

Tadousac Hatchery.

Over three million fry were last year successfully distributed from this hatchery. The parent fish are taken in nets operated under the supervision of the officer-in-charge and are held in the retaining pond at the hatchery until they are ready for spawning.

Gaspé Hatchery.

The supply of ova for this hatchery is secured from the retaining-pond at St. John, and last year over a million fry were successfully distributed in the rivers of the locality.

NEW BRUNSWICK.

Restigouche Hatchery.

This hatchery was last year filled from eggs taken from fish captured in the departmental net operated by the officer-in-charge of the hatchery. Over two million fry were liberated in splendid condition.

St. John River Hatchery.

This hatchery was this year painted and is now in a splendid state of repair. A very successful year was experienced and a large number of fry were distributed.

Miramichi Hatchery.

A new building is being placed on the site occupied by the old hatchery and a cottage for the officer-in-charge is also being constructed. This work will be completed before this season's operations commence and will make this establishment one of the most modern in the maritime provinces.

Arrangements are being made to capture a large number of parent fish in the Miramichi river this season for the purpose of supplying some of the other hatcheries with eggs.

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Salmon Pond, Little River.

The site selected at this point has proved very satisfactory as a salmon pond, and the fish spawning were in a very healthy condition. As a result the eggs secured were very healthy, and from the reports of the officers-in-charge of the various hatcheries the loss of eggs was smaller and the fry healthier than in any previous year.

Lobster Hatcheries.

The cold stormy weather during the month of May made the opening of the lobster fishing later than in previous years, and the eggs were therefore not placed in the hatchery jars as early as usual. The lobster hatcheries in this province are located at Shippigan and Shemogue, and the output was respectively eighty and one hundred and twenty-six millions of fry.

NOVA SCOTIA.

Bedford Hatchery.

This hatchery is devoted to the incubation of Atlantic salmon, but a small quantity of speckled trout are also handled. The salmon eggs are secured from the retaining pond at St. John, N.B.

Windsor Hatchery.

The eggs for the Windsor hatchery were last year secured from the Miramichi river and some seven hundred and twenty thousand fry were successfully distributed.

Margaree Hatchery.

Owing to the heavy freshet in the Margaree river last winter the pipe supplying the hatchery with water was washed out, as well as much damage done to the hatchery property. New iron piping is now being installed and the hatchery will be in readiness for its usual supply of eggs, which are secured from the St. John pond. Last season's operations resulted in the successful planting of some nine hundred and twenty-five thousand fry.

Lobster Hatcheries.

The stormy spring and ice on the coast made the lobster fishing later than usual, and as a result the output of fry from the Canso hatchery was not as large as usual, although it amounted to some sixty million fry. Bay View hatchery was more successful and succeeded in distributing one hundred and fifty-five millions.

PRINCE EDWARD ISLAND.

Kelly's Pond Hatchery.

The greater portion of the eggs for this hatchery were last year secured from the St. John pond but a quantity was shipped from Miramichi. The operations were again successful and some seven hundred and ninety thousand fry were distributed in a healthy condition.

Lobster Hatchery.

The lobster hatchery in this province is located at Blockhouse point, Charlottetown harbour, and the operations were attended with greater success than last season. Some eighty million fry were distributed in a healthy condition.

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GENERAL REMARKS.

There are now thirty-four establishments in operation throughout the Dominion with a number of applications on file for the extension of this service. These applications are from practical fishermen who place great value on the results obtained from the department's efforts.

I have visited as many institutions during the past year as possible, but a general supervision by myself of each and every hatchery from headquarters at Ottawa does not leave much time for inspection work; but this duty has been very ably performed by the inspector of hatcheries, Mr. Alex. Finlayson.

I have much pleasure in stating that all the officers connected with the service under my charge have attended to their duties faithfully, and another successful season's operations have resulted therefrom.

I am, sir,

Your obedient servant,

F. H. CUNNINGHAM,

Dominion Superintendent of Fish Culture.

ANNEX B.

REPORTS OF THE HATCHERY OFFICERS.

1. BON ACCORD HATCHERY.

NEW WESTMINSTER, B.C., April 9, 1907.

Prof. E. E. PRINCE,

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my annual report of the operations conducted at the Bon Accord, Fraser river hatchery, for the season of 1906-7.

The following ova were secured last fall and placed in the hatchery in good condition:—

Pitt river, sockeye ova.. . . .	24,000
Pemberton, sockeye ova.. . . .	4,500,000
Serpentine and Nicomekl rivers, coho ova.. . . .	1,500,000

The loss during the period of incubation was comparatively small, and the following fry have been distributed with very little loss:—

Upper Pitt.. . . .	2,000,000
Silver creek.. . . .	1,000,000
Sachnauch creek.. . . .	60,000
Vancouver island.. . . .	250,000

The cohoes were deposited in Coquitlam and Hatchey creeks, and the balance of the sockeyes have since been liberated.

With regard to the shipment to Vancouver island, I may say that the steamer *Kestrel* took this shipment of 250,000 fry, leaving the Bon Accord hatchery on March 27 and making the first deposit in Anderson lake on the 28th; here we met Mr. Taylor, inspector of the island, who informed us that it would be impossible to plant any in the stream mentioned in the telegram on account of the falls; with this information we then decided to place an extra load in the Anderson lake, which we did. From here we travelled to Alberni sound, where I secured a rig, and driving eight miles deposited 75,000 fry in Sprott lake. Kennedy lake was our next move, but owing to a heavy fog we were compelled to lie in at Bamfield creek until Sunday morning, and then proceed to Kennedy lake in very rough weather, the heavy seas playing havoc with our fish to the extent of about 1,500. I think a large percentage of those were only dazed, as they appeared to come to life when placed in the running water. On the whole, the trip was considered a very successful one, and with the exception of the small loss from rough weather the fish were in splendid condition when placed in the different waters.

The entire trip took ten days, as the steamer came back by way of the east coast of the island, but it was very instructive to all on board. Captain Ackerman, of the steamer *Georgia*, accompanied me at the request of Inspector Sword, to assist in looking after the fish.

No little praise is due the officers of the *Kestrel* for the interest they took in the experiment, both in tending the fish and in their distribution.

I am, sir, your obedient servant,

(Sgd.) J. A. JOHNSON,
Officer in Charge.

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NEW WESTMINSTER, B.C., July 5, 1907.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to report that we have got all the Atlantic salmon fry out and distributed as follows:—

Deadwood creek, Nanaimo.	10,000
Cowichan lake.	15,000
Englishmen's river.	14,000
Morris creek.	5,000
Comox lake.	38,000
Qualicum river.	33,000
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	115,000

They stood the journey well and were lively and strong when put in the water at their destination. We still have a few trout fry in the hatchery, which are well advanced and ready to go out.

I have the honour to be, sir,

Your obedient servant,

WM. ROXBURGH,

Officer-in-Charge.

2. HARRISON LAKE HATCHERY.

HARRISON HOT SPRINGS, B.C., July 26, 1907.

To Prof. E. E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to report to you on the operations conducted at this hatchery for the season of 1906-7.

The collection of salmon ova last fall was attended with most unusual difficulties; on September 6, just as a few were beginning to arrive at the first opened creeks, we were visited with a serious freshet. At Silver creek the water rose six feet during the night, and in spite of all the men could do to keep the fence clear of debris it clogged up solid and then went out, carrying men, scow and boats with it. Next day we arrived with launch in time to rescue the men from an unenviable situation. After the creek had subsided, there being no appearance of fish, I thought it best to close the camp at this point.

At Douglas the prospects for fish up to time of freshet was very fair. Though the fence was not much damaged, yet sufficiently so to allow the fish to pass up, and although the breach was repaired as soon as possible, nothing worth while was taken.

At the three creeks near 20-Mile Point, as at Silver creek, there were not many fish at any time during season, and as the water rose four feet over the fences and flooded the whole neighbourhood, our operations at this point were not attended with success.

At Morris creek (our most important spawning creek), the fence was not in position at the time of this freshet (September 6), but on October 25, heavy warm rain together with the melting of early snow in the hills, caused a flood here also, which covered the whole valley. While the fence stood the strain the creek burst its banks half a mile up and made several new channels that gave the fish free passage. But for this, I estimate we should have had five million more sockeye eggs in our collection,

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At Harrison River rapids the water was in flood the whole fishing season.
The total number of eggs in hatchery was :—

Sockeye salmon....	13,767,000
Cohoe salmon..	660,000
Spring salmon...	1,578,000
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Less bad eggs....	16,005,000
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Number of fry....	1,280,400
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Number of fry....	14,724,600
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Four million of the ova were from Pemberton.

The liberation of the fry was not concluded until the early part of May, being five to six weeks later than usual, on account of the low temperatures of the water. They were in splendid condition.

During the season we have built the hull of a new launch out of the hatchery. She has just returned by her own motive power from New Westminster where she had her engines installed.

The new boat should prove a great help in the work here and also in maintaining communication with Pemberton hatchery. This summer the hatchery and other buildings have been given another coat of paint, and the troughs, buckets, tray, &c., have been lacquered and put in shape for coming season.

I am, sir,

Your obedient servant,

THOS. ROBINSON,

Officer-in-Charge.

3. PEMBERTON HATCHERY.

LILLOET, B.C., June 18, 1907.

Professor E. E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit the following report on this hatchery for the past season.

The run of sockeye salmon during the fall of 1906—though not as large as that of the preceding year—was very satisfactory, and, but for an exceptionally high freshet which destroyed four of the six fences during spawn-taking, the number of eggs secured would have been in excess of 1905. As it was, however, twenty-one and a half millions of sockeye ova were placed in the hatchery. Eight millions of which were later transferred in the eyed stage to the Harrison lake and Fraser river hatcheries.

As a result of the damage to the fences other means of capturing the parent fish had to be resorted to;—seines and gill nets;—and in consequence the loss in ova was higher than it would otherwise have been, though it should also be borne in mind that my loss includes eggs picked here from the ova shipped to the other hatcheries.

Incubation was greatly retarded by the severe winter; some of the later spawned ova taking 200 days to hatch.

The system of allowing the fry to depart when they felt inclined, which proved successful the previous season was again followed and the results of the season's operations show all output of ten and a half millions of sockeye fry. Efforts were also made to take spring salmon ova at the Tenas rapids, twenty miles from the

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hatchery, but only 150,000 eggs were taken from which 120,000 fry were released. Two hundred thousand Cohoe salmon fry were also liberated, making the total output of sockeye, spring and coho 10,820,000.

Last winter when the water in the Birkenhead river was low, a permanent site for a fence was levelled with rock and crib abutments built to protect the banks; the hatchery clearing was also enlarged to the extent of about six acres, and forty hatching troughs were built for the outside hatchery, the fitting up of which is at present being proceeded with.

When the improvements at present under way are finished, this establishment will be very complete and will have a capacity equal to that of Harrison lake hatchery.

The prospects for the coming season are good and I expect to secure at least twenty-five millions.

In conclusion, I feel it incumbent to report that the staff has rendered every assistance, and the Indians show an increasing desire to aid the work of the hatchery.

I am, sir,

Your obedient servant, -

ALEXANDER ROBERTSON.

4. GRANITE CREEK HATCHERY.

KNALT, B.C., August 8, 1907.

Professor E. E. PRINCE,

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit the following reports on the operation of this hatchery during the past season.

There were three distinct runs of sockeye salmon to the Shusway lake districts last season.

The first run were very large red fish.

The second small; colour, olive green on back to white on belly; clouded with grey composed of minute black specks. No trace of red in either skin or flesh. Females when spawned weighed 4½ lbs.; males, 6 lbs. 2 oz.

The third run was of very small bright red sockeye.

Eggs of the first run went 8,150 to the Imperial quart measure.

Eggs of the second run 9,265 to the quart.

The first run arrived at Scotch creek on August 17 and terminated there on September 14. At Anesty river, 47 miles beyond Scotch creek, they arrived six days later, on August 23; the last entering Anesty river on September 19 at Granite creek, 65 miles beyond Scotch creek. The first arrived on September 3, the last of the first run entering there on September 15.

On October 16, after a lapse of 32 days, the second run of sockeye arrived at Scotch creek, the last fish entering on October 31.

This second run also terminated at Granite creek on October 31, but had arrived there on October 13.

On November 2, the first of the small, bright red sockeye of the third run arrived at Granite creek, after a lapse of 48 days, since the termination of the first red run.

The intermediate, second or green run had never been seen in Granite creek before; and four years previous no sockeye of any strain entered Granite creek to spawn, it only having been visited by sockeye during the big fourth yearly runs.

Neither had there been a second run at Scotch creek for four years before; but in that year ova from similarly coloured sockeye taken at Morris creek on the Harrison, had been hatched here and the fry liberated at Granite creek.

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It is not possible to give dates pertaining to the runs at Adams river, as they overlap, and occasional females were still straggling in when the fence had to be taken out on account of freezing, and there being no males.

This fence at Adam's river was only across a smaller channel of that large swift stream down which large trees are carried at short intervals by the current.

Neither can date be given when the last salmon entered Granite creek, as this spring the remains of two were found that had entered the trap under the ice. They however were probably cohoes, which species had been entering since October 10.

The differences between the three runs of sockeye at Granite creek were very distinct.

Between the two red runs, 48 days apart, the difference in size was very great. The small fish of the third run were a brighter red than the first.

Three years before, at Scotch creek, this order had been reversed, when ten days after the run of small red sockeye, a number of very large plum-coloured sockeye entered the trap:—

The quantity of salmon ova taken was 7,558,000, as follows:—

Scotch creek, 1st run.....	4,471,000
Scotch creek, 2nd run.....	233,000
Anesty river.....	1,539 000
Adams river.....	592,000
Granite creek, 1st run.....	102,000
Granite creek, 2nd run.....	181,000
Granite creek, 3rd run.....	75,000
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Total sockeye.....	7,193,000
Cohoos—	
Granite creek.....	128,000
Adams river.....	237,000
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Total cohoes.....	365,000

One hundred thousand dead salmon eggs were picked out, reducing the number of salmon fry to 6,858,000, which were liberated under the ice at Granite creek.

On August 23 of this year, 5,000 *Salmo-Kamloops* were released in Skimekin creek, six miles from the hatchery, and of which we hope to make a station for supplying trout ova. It had been abundantly stocked from Granite creek before, but a subterranean channel had opened where the creek empties into Skimekin lake, draining it dry, and leaving the fish stranded. This passage is again blocked and Skimekin lake now restocked, is higher than it has been for many years.

The new steamer built at Kamloops this summer for the hatchery does admirably and will enable us to venture through worse storms than we could before.

We also have the lumber drying to provide new and comfortable accommodation for the staff.

I am, sir,

Your obedient servant,

D. S. MITCHELL.

5. LAKELSE LAKE, SKEENA RIVER HATCHERY.

Prof. E. E. PRINCE,

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit herewith my fifth annual report of operations carried on at the Skeena river hatchery for the season of 1906 and 1907. I arrived at the hatchery

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on July 17, after a pleasant and somewhat easy trip in comparison to what we have had other seasons. Messrs. Pretty, Williams and S. Whitwell accompanied me.

Two days after we arrived, Messrs. Pretty, S. Whitwell and myself left the hatchery and prospected all the rivers and small streams emptying into Lakelse lake. We found a good many sockeyes at Sockeye river, and also at the Schalbuckhand river, a small river where the quantity of fish previous to this last season has been too insignificant to bother with, but I was agreeably surprised to find a great many fish at the mouth of that stream, and I decided at once to place fences and a trap in there to find out its value as a place suitable to collect ova; and on July 27 we had all the necessary fences and pens in position.

In July we were honoured by your visit and that of Inspector Williams, and the next day the party visited the spawning grounds at Sockeye and Schalbuckhand river, where there was about fifty sockeyes in the new pens and at that early date several of those were ready to spawn.

On August 6 we commenced our first spawning, and on that day we got 232,000 sockeye eggs, and continued collecting ova from the new spawning grounds until we had obtained 4,276,000, filling the hatchery to its utmost capacity, which was accomplished on August 30, being twenty-one days earlier than any previous season.

All the eggs collected this past season were obtained at Schalbuckhand river, with the exception of about a quarter of a million which we got from Sockeye river, and I think without a doubt that we had two distinct runs of sockeyes in Lakelse lake the past season as most of the fish at Sockeye river were very hard and unripe at the end of August, whereas the fish at the Schalbuckhand river were in splendid condition all through the month of August.

We then took out all our fences and traps and stacked them away ready for next season's work.

On August 17, Mr. Smith arrived to survey the hatchery site, which he did, also a few acres at the mouth of the Sockeye and Schalbuckhand rivers, which is necessary for the department to have on account of so many parties taking up land in that vicinity. Mr. Smith completed his work and left on the 22nd.

We also had a very large run of coho the past season; the first ones were seen on September 7.

From the end of August until the end of November we had a very wet season, but nothing to do and no serious damage.

On October 24, several steel heads were seen, of which we caught two for the house.

The first snowfall was on November 9, and we had continued falls, all through the winter, when on February 7, 1907, we had 51 inches on the level.

The first hard frost was on December 4 and 5, which froze most of the rivers and lakes up solid, and when we left in April 18 there was still 2 feet of ice on Lakelse lake. The past winter was rather a severe one, the thermometer falling down to 20 below zero on February 1, and for nineteen days previous from zero to 8 degrees below, but notwithstanding the long cold winter we had all the water we required for hatchery purposes.

The first shipment of ova commenced hatching on October 27, 31 days earlier than the previous season, and on February 26, every egg in the hatchery was hatched.

The ova all through the season was in splendid condition, so much so that the total amount of bad eggs picked out was only 150,250 out of 4,276,000 collected, and 4,125,750 young sockeye fry in splendid condition were liberated on April 16 and 17 and 18.

Attached is a list of the dates on which the ova were collected, when eyed, when hatched, and when liberated, and I am very pleased to say that the past season has been the most successful one that we have ever had at the Lakelse hatchery up to the present time.

In conclusion I may say that there may have to be a small expenditure the coming season in connection with the dam, and also for a new canoe, which is badly needed, as the one we have at present is unsafe.

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The prospects for the coming season are very bright and there is very little doubt but that we shall be able to fill the hatchery again to its fullest capacity.

I am pleased to say that I have been well supported by the staff and that all hands have done their utmost to make the season's work a very successful one.

I am, sir,

Your obedient servant,

THOS. WHITWELL,

Officer-in-Charge.

Skeena River Hatchery, B.C.

RECORDS of Sockeye Ova and Fry at Lakelse Hatchery, 1906 and 1907.

Date.	Ova Collected.	When Eyed.	Commenced Hatching.	When Liberated.	
1906.					
August 6.....	232,000	September 5 ...	October 27....	} April 16 and 17, 1907.	
" 7.....	240,000	" 5.....	" 29....		
" 9.....	200,000	" 8.....	November 2....		
" 10.....	128,000	" 8 ...	" 8....		
" 13.....	584,000	" 13.....	" 12....		
" 15.....	344,000	" 15.....	" 17....		
" 17.....	72,000	" 17.....	" 23....		
" 19.....	184,000	" 18.....	" 26....		
" 22.....	272,000	" 21.....	" 30....		
" 24.....	448,000	" 25.....	December 2....		
" 25.....	368,000	" 28.....	" 5....		
" 27.....	504,000	" 28.....	" 17....		
" 28.....	400,000	October 1....	" 21....		
1907.					
" 30.....	300,000	" 4....	January 1.....		

Number of eggs put in hatchery.....	4,276,000
Number of bad eggs picked out.....	150,250
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Fry liberated.....	4,125,750

6. RIVER'S INLET HATCHERY.

RIVERS INLET, B.C., August 14, 1907.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit to you herewith a report of the operations of this hatchery for the season of 1906-7.

In preparation for taking the quantity of eggs necessary for stocking the hatchery three creeks were fenced, viz., Quap, Ashulum and Zenessee. The current, however, at Ashulum was too strong for a fence to be held there. It rises so quickly and the rise brings down so much heavy timber that no fence could hold, and the one put in, though very strong, was completely broken up in the first freshet. We had, there-

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fore, to depend upon the two remaining fences for the eggs, and in both the salmon were plentiful. Owing, however, to the high water in both creeks many salmon got past the fences.

The first ova were taken in the Quap trap on September 5, when 80,000 were secured, the balance of the month yielding about one million more. At Zenessee the salmon appear to be much later coming into condition, and though several schools were in the lake at the mouth of the creek, no eggs were secured until October 4, when 230,000 were taken. From this date on both creeks yielded fairly well to October 26, and 8,300,000 eggs had been brought to the hatchery, when the weather became so bad that both fences were washed out. As the lake was very high they could not then be replaced, and most of the salmon passed up the creeks, and operations, so far as the creeks were concerned, had to be abandoned for the season. The fence at Quap was twice partially washed out during the month. The one at Zenessee, owing to the high water in the lake, was submerged for some days, allowing a considerable number of fish to pass up the creek.

The seine was tried on the Wannock river, but with poor results, for only 140,000 eggs were secured, the fish being either too hard or mostly spent.

During the winter we were very much troubled by the cold weather that prevailed during the month of January and the early part of February. It was much colder than usual in this part of the country, and was not anticipated. In the creek from which the water is taken for the hatchery, large quantities of anchor ice formed, causing lots of mush ice to come through the pipes to the hatchery, and at one time some difficulty was experienced in keeping them clear. Two small dams had to be put in the creek to keep the water high enough over the intakes to prevent them freezing.

The condition of the eggs generally was fairly good, but they were very slow in coming to maturity. The first young fish showed on December 17, 1906, 88 days. From that date, however, when the cold weather commenced, they appeared to lie dormant, and for weeks no visible progress could be noticed. It was not until the end of April that all the eggs were hatched. The first of the fry were put out into the lake on March 12, and at various intervals until May 14, when the last of them were transferred to the lake.

The abstract of operations for the season 1906-7, is as follows:—

Eggs received in hatchery, 8,440,000.

Fry put out, 7,577,000; bad eggs and dead fish, 863,000; total, 8,440,000.

This spring a gasoline launch was purchased by the department for the use of the hatchery. The selection of the boat by Mr. Roxburgh was a very good one, and in the high winds we have on the lake, she has proved herself to be a very seaworthy craft, and the engine is giving every satisfaction, enabling the work to be done in less time and at less expense.

A boat-house was built on the Wannock river 30 by 16, in which the launch may be under shelter when not in use. A piece of ground about 30 yards square was protected by cribbing 4 feet by 5 feet high and filled in this spring.

Part of this was planted with potatoes, cabbages and other vegetables, which have done very well considering the new ground.

The potatoes, though not yielding very well, have been quite a saving owing to the high price of this vegetable this summer.

I have the honour to be, sir,

Your obedient servant,

ROBT. C. BUCKNALL,

7. NIMPKISH HATCHERY.

NANAIMO, B.C., April 15, 1907.

Professor EDWARD E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I have received the following report from the British Columbia Packers Association of the take and output of their hatchery on the Nimpkish:—

'We commenced to take eggs on October 15, 1906, and had our trays all full on the 13th, having taken 5,014,000, which is the capacity of the present hatchery.

'The first fish appeared on December 25, being eighty-one days hatching and taking 985 units. All fish were out by the end of January, and we commenced to put swimming fish into the lake about the middle of March, 1907, the last being put into the lake April 4.

Eggs put into the hatchery	5,014,000
Bad eggs picked out	143,500
Dead fry	500
Fry planted in the lake	4,870,000
Loss	144,000

or less than 3 per cent, which we consider a very creditable showing.

'Our water supply gave out during the very cold weather, pipe being frozen, but our man in charge managed to keep supply of water until he got the same thawed out and lost no eggs at all by the stoppage of water in the main pipe.'

I am, sir,

Your obedient servant,

EDWARD G. TAYLOR,

Inspector of Fisheries.

8. BERENS RIVER HATCHERY.

SELKIRK, MAN., August 24, 1907.

Professor E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa, Canada.

SIR,—I have the honour to submit herewith my annual report of the operations for and in connection with the Berens river hatchery for the season of 1906 and 1907.

We left here on the steamer *Premier* on September 8 with men and supplies for the Little Saskatchewan river, which is situated about 270 miles distant by boat route, and arrived at our destination on the 9th. The peculiarity of this fishing ground is that the main run of whitefish takes place between the middle of September and October 5, and parent fish taken at that time must be held from four to six weeks before spawning; but in order to get the parent fish they must be taken at this time.

On the 14th we had our first lift, securing about 200 fish. On the 15th, 1,365. This catch was evidently increased by heavy storm on the lake at the time; but from this time on our daily catch was about 1,500 fish each lift.

On the 20th, having completed everything, we left for Berens river, leaving Mr. Young in charge with sufficient men to handle the nets. During this time we had put up a house, 18 by 28, making very comfortable quarters for the men to live in; also a shed 14 by 18, in which to handle spawn during the absence of the steamer. We

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made crates sufficient to hold about 30,000 parent fish; a dock about 300 feet long, to work the crates from; also a dock for the steamer. At this time we had 11,000 fish in the crates.

Arriving at Berens river on the 20th, we immediately began locating places for the nets in that vicinity. We set one in Berens river (largely to know if whitefish ran up the river) and a third one we set in Pigeon bay, twelve miles distant from Berens river. To handle these two nets it was necessary to have a small steamer, and the *Spray* was chartered for that purpose. Crates were built at this point to hold about 10,000 fish. The fishing was continued at these three points until October 17, and having all crates filled at the Little Saskatchewan, we put 800 parent fish on the *Premier*, that left for Berens river, where they arrived in fine shape, and were put in crates there.

On the 21st, the first consignment of eggs—7,900,000 and 1,300 parent fish—were brought over by the *Premier* from the Little Saskatchewan and safely placed in the hatchery. The *Premier* again arrived on the 28th with 25,000,000 eggs and 1,600 parent fish. On November 21, the third lot of eggs, consisting of 28,750,000, was safely landed in the hatchery.

On November 10, having filled all the crates we had for Selkirk hatchery and sufficient eggs in cans to fill Berens River hatchery, we turned the balance of the fish, which consisted of several thousand, out of the crates and put everything in shape for winter, and left with the entire crew for Berens river, where every jar was filled with eggs to its full capacity. The *Premier* left for Selkirk on the morning of the 11th, arriving there on the 12th. During this time we had taken from the fish brought over from the Little Saskatchewan, and from the two nets at Berens river about 37,000,000 eggs, making in all a total of 110,000,000 eggs placed in Berens River hatchery. I might add that our arrival in Selkirk was just in time, as we had great difficulty in getting the boat into winter quarters, winter having set in the second day after our arrival.

The hatchery ran along very smoothly without any incident worthy of note, and on June 6 we succeeded in hatching the last of 92,000,000 fine, strong fry, which we put into the river at the hatchery.

During the winter 500 cords of wood were taken out with the aid of the Indians, for future use at this point.

I have the honour to be, sir,

Your obedient servant,

F. W. HOOKER,

Officer-in-Charge, Selkirk, Man.

9. SELKIRK HATCHERY.

SELKIRK, MAN., August 15, 1907.

Professor E. E. PRINCE,

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—In submitting my annual report of the operations in connection with the Selkirk hatchery for the season of 1906 and 1907, would say that my report of the fishing operations for the Berens River hatchery, conducted at the Little Saskatchewan river, would apply equally to Selkirk, as the eggs for this hatchery were obtained during the same operations.

These eggs were packed during the first week of November and safely placed in the hatchery on November 12—just two days ahead of our winter—when the Red river froze over and closed navigation.

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Our great difficulty in regard to this hatchery is to get the eggs in the hatchery before winter sets in and stops all means of transportation until ice is formed strong enough to carry.

After a very good winter's operation at the hatchery, we succeeded in hatching out of the 62,500,000 eggs placed in the hatchery, about 45,000,000 fine, strong fry, the last of which was put in the river, at the hatchery on May 12.

I have the honour to be, sir,

Your obedient servant,

F. W. HOOKER,

Officer-in-Charge.

10. SANDWICH HATCHERY.

SANDWICH, ONT., July 29, 1907.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—In accordance with the regulations of the Fishery Department I herewith submit to you my annual report on the fish cultural operations conducted in the Sandwich hatchery for the past season.

From the 73,500,000 eggs collected during the whitefish spawning season and placed in the hatchery 61,500,000 young fry were hatched, which were distributed in a healthy condition in the following waters :—

Point Edward, Lake Huron	3,000,000
Peach Island, Lake St. Clair	4,000,000
Fighting Islands, Detroit river	4,000,000
In bay below Fighting Island	4,000,000
Turkey Island, Detroit river	4,000,000
Stony Island, Detroit river	4,000,000
Bois Blanc Island, Detroit river	7,000,000
In lake below Bois Blanc Island	3,000,000
Pigeon bay, Lake Erie	3,000,000
Colchester, Lake Erie	3,000,000
Kingsville, Lake Erie	1,000,000
Leamington, Lake Erie	1,000,000
Rondeau, Lake Erie	1,000,000
Port Stanley, Lake Erie	1,000,000
Hamilton, Lake Ontario	1,000,000
Burlington bay, Hamilton	500,000
Toronto, Lake Ontario	1,000,000
Niagara, Lake Ontario	1,000,000
Belleville, Bay of Quinté	1,000,000
In river at hatchery	14,000,000
Total	61,500,000

COLLECTING PICKEREL EGGS.

After the close of the whitefish season the jars were refilled with 69,000,000 pick-erel eggs secured from the pound nets of Lake Huron from which 41,500,000 young fry were hatched and disposed of as follows :—

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Point Edward, Lake Huron..	5,000,000
Peach Island, Lake St. Clair..	4,000,000
Fighting Island, Detroit river..	5,000,000
Bois Blanc Island, Detroit river..	5,000,000
Hamilton, Lake Ontario.....	2,000,000
Yamaska river, Quebec.....	1,500,000
In river at hatchery..	19,000,000
Total..	41,500,000

The above fry were all distributed in a splendid condition.

I have the honour to be, sir,

Your obedient servant,

WM. PARKER.

11. OTTAWA HATCHERY.

OTTAWA, July 25, 1907.

Prof. E. E. PRINCE,

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—Herewith I beg to submit my annual report of the operations carried on at the Ottawa hatchery during the past season :—

On November 16 I received from Wm. Armstrong about 1,000,000 salmon trout eggs.

On February 13 I received from Wm. Parker, of the Sandwich hatchery, about 600,000 eyed whitefish eggs.

On March 22 I received through A. C. Finlayson about 70,000 Atlantic salmon.

On March 23 I received from Bark River hatchery, through A. C. Finlayson, about 185,000 brook trout.

On March 24 I received from Isaac Sheasgreen about 200,000 Atlantic salmon.

All the above eggs were laid down in the incubating troughs and jars in the latter part of May and the beginning of June, hatched out strong and healthy.

The young fry were all deposited very successfully in the under-mentioned waters by U. Grignon, J. B. Rochon and S. J. Walker.

Distribution of Salmon Trout.

Kosbabogamog lake..	20,000
Norwood..	15,000
Lake Moscou..	30,000
Lady and Bark lakes..	25,000
Crooked lake..	25,000
Lac de la Truite..	20,000
Green lake..	20,000
Lac Le Cœur..	15,000
Hawk lake..	25,000
Lake Veronica..	25,000
Lake Malone..	15,000
Moose lake..	20,000
Lac St. Esprit..	25,000
Lake Seven..	25,000
Lake Gregoire..	25,000
St. Sixte lake..	20,000

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Charleston lake.	30,000
Pike lake.	36,000
Lac l'Achigan.	30,000
Lac a Ricard.	25,000
Lac Lunette.	25,000
Lac Rouge.	15,000
Lac Long.	20,000
Lac Lemmer.	20,000
Ruisseau des Ressources.	36,000
Racquette.	36,000
Anne lake.	30,000
Meaches lake.	48,000
Clarendon lake.	30,000
Baron lake.	30,000
Sharbot lake.	48,000
Rideau lake.	48,000
Christie's lake.	20,000

Total distribution of salmon trout. 877,000

Distribution of Whitefish.

Meaches lake.	125,000
Shawinigan lake.	150,000
Lake Deschenes.	250,000

Total distribution of whitefish. 525,000

Distribution of Speckled Trout.

Spring Dale	10,000
Norwood.	5,000
Ploto creek.	5,000
Margorie lake.	5,000
Lake Malone	5,000
Campeau Fish and Game Club	5,000
Clear lake.	5,000
Chelsea pond	5,000
Mastigouche	10,000

55,000

In addition to this we also shipped to Alph. Robert, of the Mont Tremblant hatchery, 125,000 eyed brook trout eggs, making a total distribution of 180,000 brook trout.

Distribution of Atlantic Salmon.

Moose lake.	8,000
St. Sixte.	8,000
Campeau Fish and Game Club lakes	8,000
Chelsea pond	8,000
Green lake	8,000
Meaches lake.	8,000
Lac Rouge	8,000
Charleston lake.	15,000
Lake Bernard	8,000
Christie's lake.	16,000

95,000

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In addition to the above, 125,000 eyed eggs were shipped to C. B. Sword, New Westminster, B.C., and 42,000 eyed eggs distributed among the hatcheries in the east.

Recapitulation.

Whitefish	525,000
Speckled trout	55,000
Salmon trout	887,000
Atlantic salmon	95,000
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Total distribution	1,552,000
Eyed eggs shipped to other hatcheries	292,000
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Total	1,844,000

I might add that during the year, 15,000 persons visited the hatchery. The incubating troughs, &c., have been revarnished and everything is in readiness for the season's operations.

I have the honour to be, sir,

Your obedient servant,

JOHN WALKER.

12. NEWCASTLE HATCHERY.

NEWCASTLE, ONT., July 29, 1907.

Professor E. E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour herewith to submit my report on the operations of this hatchery during the past year.

According to your instructions, I proceeded to Wiarton with my usual assistance on the third day of October last, to procure the necessary supply of salmon trout ova for this and other hatcheries.

After having our stakes driven, we had our nets all in by October 17, and by the end of the month the fish were on their spawning grounds, and we had procured over two hundred trays of eggs, which I placed in the Newcastle hatchery. I may remark that last year the season was much earlier than for a number of former years.

By November 15 I handed over to Mr. Walker, of the Ottawa hatchery, 1,000,000 eggs, and at the same time 800,000 for Mont Tremblant. I succeeded by the end of the month in procuring all the eggs we required and had about 2,000,000 to lay down in our hatchery at Newcastle in first-class condition. In February last, according to your instructions, I shipped thirty trays of eyed eggs to the Magog hatchery.

I regret to report that on February 14 last I had the misfortune to lose my assistant, Mr. John Kenefick, who was called away by death on that date. He had been in the employ of the department for about thirty years, and was a first-class man. I am pleased to say that Mr. Alex. McLeod, who has been with the department for about thirteen years, took his place, and proves himself a first-class man in every respect.

Last season's operations were very successful, and the following schedule will show the number of yearlings and fry distributed in the different localities.

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YEARLING SALMON TROUT.

Charlston lake, at Athens.. . . .	700
Simcoe lake, at Barrie.. . . .	800
Bay Quinte, at Belleville.. . . .	800
Salmon lake, at St. Ola.. . . .	800
Lake Ontario, at Consecqn.. . . .	700
“ Picton.. . . .	700
Lake Huron, at Goderich.. . . .	500
Georgian Bay, at Wiarton.. . . .	200
Total.. . . .	5,200

SALMON TROUT FRY.

Lake Ontario, at Consecqn.. . . .	150,000
“ Picton.. . . .	100,000
“ Kingston.. . . .	100,000
“ Toronto.. . . .	100,000
Lake Huron, at Goderich.. . . .	200,000
“ Southampton.. . . .	200,000
Lake Simcoe, at Barrie.. . . .	100,000
Lake Couchiching, at Orillia.. . . .	100,000
Georgian bay, at Wiarton.. . . .	200,000
“ Collingwood.. . . .	100,000
Charlston lake, at Athens.. . . .	100,000
Rideau lake, at Portland.. . . .	50,000
“ Delta.. . . .	50,000
Lakes at St. Joseph.. . . .	50,000
“ Clifford.. . . .	50,000
“ Parkham.. . . .	50,000
Lake Ontario, Newcastle.. . . .	100,000
Total.. . . .	1,800,000

I beg also to report than in June last eighteen small-mouthed parent black bass were delivered by Mr. J. K. McCargar, of Belleville, and placed in our ponds. These fish have done exceedingly well, and the following distribution of three months' old bass has been successfully made:—

Owen Sound bay, Owen Sound.. . . .	400
Pigeon and Deer lakes, Muskoka.. . . .	400
Temperance lake, Athens.. . . .	400
Pine and Grass lakes, Haliburton.. . . .	400
Rideau lakes, Leeds.. . . .	400
Total.. . . .	2,000

I wish to add that all fry and fingerlings from this hatchery were deposited in the different waters in the best of condition. Our hatchery is also in first-class repair and our work up to date. Our nets will require some overhauling, and will answer with very little expense for another year.

We are holding a number of young salmon trout in our tanks to raise to fingerlings, but the season is yet too early to predict the result.

I have the honour to be, sir,

Your obedient servant,

WM. ARMSTRONG.

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13. MAGOG HATCHERY.

(Translation.)

MAGOG, July 27, 1907.

Professor E. E. PRINCE, Esq.,
Commissioner of Fisheries,
Ottawa.

SIR,—In transmitting you my annual report on the operations of this hatchery for the season of 1906-7, I take pleasure in informing you that the eggs collected in Lake Memphremagog in October and November, 1906, numbered 900,000, and have all hatched successfully; fry were distributed in very good condition, as follows:—

I received, in good condition, 75,000 speckled trout from the Lake Lister ponds.

I received in the fall of 1906, 300,000 salmon eggs from St. John, N.B.

I received in the fall of 1906, 165,000 salmon trout eggs from Newcastle, Ont.

I received in the fall of 1906, 40,000 speckled trout eggs from St. Alexis, and delivered to them 50,000 salmon eggs.

MAGOG FISH HATCHERY, P.Q.

(Distributing of fry in May and June, 1907.)

Atlantic Salmon.

Spider lakes (3)	10,000
Lake Dubé	10,000
Lake Oxford	5,000
Lake Memphremagog	30,000
Lake Brome	10,000
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	65,000

Salmon Trout.

Lakes Spider (3)	10,000
Lake St. François	25,000
Lake Dubé	20,000
Lake Silver	15,000
Lake Oxford	5,000
Lake Memphremagog	25,000
	<hr/>
	100,000

Grey Trout.

Lake Scakwaninipus	40,000
Lake Spider	35,000
River Pointu	25,000
Lake Roche	40,000
Lake Maheux	25,000
Lake Denyson	45,000
Rivière Noire	40,000
Lake Joseph	40,000
Lake Brome	75,000
Lake Massawippi	60,000
Lake Key	30,000
Lake Memphremagog	150,000
Lake Oxford	10,000
	<hr/>
	615,000

Speckled Trout.

Lake Cliff.	10,000
Springs, brooks and ponds.	15,000
Allward lake.	25,000
Lake St. Modeste.	25,000
East lake.	15,000
Lake Silver.	15,000
	<hr/>
	105,000

In addition to this distribution, 225,000 grey trout fry, 50,000 Atlantic salmon fry and 50,000 salmon trout fry were conveyed to the Lake Lister ponds.

I also sent 105,000 Atlantic salmon eggs to New Zealand and 50,000 to St. Alexis hatchery.

RECAPITULATION.

Atlantic salmon—

Lake Lister.	50,000
Other lakes.	65,000
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	115,000

Grey trout—

Different lakes, 615,000; Lake Lister, 225,000.	840,000
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Salmon trout—

Lake Lister, 50,000; other lakes, 100,000.	150,000
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<i>Speckled trout.</i>	105,000
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	1,210,000

The total distribution of fry from the Magog hatchery for the season of 1906-7, now ended, has been 1,210,000, and eggs shipped to other hatcheries 155,000.

The fry was all distributed, this season, in excellent condition.

I have the honour to be, sir,

Your obedient servant,

(Sgd) A. L. DESEVE,

Officer-in-Charge of the Magog Fish Hatchery.

14. MOUNT TREMBLANT HATCHERY, P.Q.

MOUNT TREMBLANT, P.Q., August 14, 1907.

Prof. E. E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit herewith a report in detail of the operations conducted at the Lac Tremblant hatchery for the season of 1906-7:—

The following eggs were received in good condition at this hatchery:—

Salmon trout eggs.	640,000
Atlantic salmon eggs.	2,200
Speckled trout eggs.	7,500

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The hatching of the eggs was very slow, and lasted from April 1 to June 10; but the output was very satisfactory, as the following figures show:—

Salmon trout.. . . .	633,000
Atlantic salmon.. . . .	2,000
Speckled trout.. . . .	7,000
Total.. . . .	642,000

The fry distributed were in splendid condition, in the following waters:—

Speckled trout.—Lac Cornu, at Nantel; Lac du Sauvage, at St. Faustin; Lac La Truite, at Ste. Agathe; Lac Lafleur, at Val Morin; Lac Michaudville, at Labelle; Lac St. Antoine, at Nominigues; Lac Bois-Franc, near Lac Tremblant.

Salmon trout.—Lac Marois, at Shawbridge; Lac Masson; Lac Noir, at Ste. Marguerite; Lac Charlebois; Lac aux Ecorces, at Arundel; Lac Tremblant.

The Atlantic salmon fry were all distributed in Lac Tremblant.

Some needed repairs were made with regard to the water supply last fall, and the hatchery is now in a good state of repair and ready for next season's operations.

I have the honour to be, sir,

Your obedient servant,

ALPHONSE ROBERT.

15. BALDWIN'S MILLS REARING PONDS, P.Q.

BALDWIN'S MILLS, QUE.,

July 27, 1907.

Prof. E. E. PRINCE,

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—In accordance with your instructions, I have the honour to submit my report for the operations carried out in this hatchery the past year, commencing September 22, 1906.

From the fingerlings on hand last fall, I delivered as follows:—

GREY TROUT.

Fall, 1906—

Massawippi lake, fingerlings.. . . .	15,000
Brome lake, fingerlings.. . . .	2,000
Magog lake, fingerlings.. . . .	40,000

Spring, 1907—

Baldwin's pond, or Barnston lake, yearlings.. . . .	10,000
Massawippi lake, yearlings.. . . .	750
Magog lake, yearlings.. . . .	750

ATLANTIC SALMON.

Fall, 1906—

Ottawa, fingerlings...	500
Wapizagonk lake, fingerlings.. . . .	500
Brome lake, fingerlings.. . . .	11,000
Massawippi lake, fingerlings.. . . .	25,000
Magog lake, fingerlings.. . . .	32,000

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Spring, 1907—

Magog lake, yearlings.	1,500
Massawippi lake, yearlings.	1,500

SALMON TROUT.

Spring, 1907—

Magog lake, yearlings.	6,500
Massawippi lake, yearlings.	5,000

SPECKLED TROUT.

I am pleased to state that I took 215,000 eggs from the brook or speckled trout in retaining pond, from which were hatched 200,000 fry, and I distributed them in a healthy and thriving condition to the following places:—

Spring, 1907—

Magog hatchery.	75,000
Watopekak lake.	5,000
The balance retained in the rearing tanks here.	

I have the honour to acknowledge the receipt of the following fry from the Magog hatchery:—

Salmon.	50,000
Salmon trout.	50,000
Grey trout.	225,000

I have caused repairs to be made on the old flume as per your instructions by letter June 25.

The structure is some 800 feet in length, and varies in height from the ground 2 to 6 feet according to location. It is very shaky owing to the action of frost in winter, and I would suggest that proper piping be laid before another season.

The benefits resulting from the planting of fingerling fish in the waters of this locality are yearly becoming more apparent; especially is this the case with regard to Baldwin's pond or Barnston lake, and Lake Averil, where the fishing this year, both in quality and quantity, has been better than ever before.

It gives me much pleasure to see the public interest manifested in this hatchery. Pleasure parties from the health resort on the shores of this lake are daily visitors whose presence demand that the surroundings be kept neat and clean and as far as in my power I have kept them so.

I am, sir,

Your obedient servant,

W. G. BELKNAP,
Officer-in-Charge.

16. TADOUSAC HATCHERY.

TADOUSAC, July 29, 1907.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my annual report of the operations carried on at the Tadousac hatchery during the past year. From the salmon eggs collected in November last, 1906, we have distributed this season 3,860,000 salmon fry, as follows:—

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Roberval hatchery (eggs).....	500,000
Ste. Marguerite hatchery (eyed eggs).....	500,000
A Mars river (Ha Ha Bay).....	150,000
St. John river.....	150,000
Little Saguenay river.....	150,000
Murray river.....	200,000
Jacques Cartier river.....	100,000
Stadacona Club.....	10,000
Baude river (by land).....	800,000
Chisholm river (by land).....	800,000
Maurice lakes.....	500,000
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	3,860,000

The distribution in the upper Saguenay was, as in former years, carried out with the assistance of a tug.

I may add that the work this year was rendered more difficult than usual on account of the poor condition of the roads at that season of the year.

As usual we set our salmon fisheries for the capture of the parent fish early in May, but this year they were late coming up, the first two salmon only being caught on May 30. We have, however, secured for building purposes 570 fine salmon, 309 are females and 261 are males. At the time of the spawning I expect to get at least 3,000,000 of eggs, as the females are all of large size. In addition to the above 351 salmon of smaller size were liberated at the door of the fishery station, and 103 damaged fish sent to the hospital, Hotel Dieu, St. Valier, of Chicoutimi.

Since I have had charge of the Tadousac hatchery, it is the first season that I have seen so many injured salmon in our nets, and by inquiring I find that the same thing has occurred in the other fisheries, and I would be glad to have some explanation concerning it.

Our St. Marguerite hatchery has again this season proved a success; the eyed eggs, packed in wet moss, were safely carried in on spring sleds in the first days of April. The eggs hatched out well and the fry resulting were planted in June in the Portage river, which supplies the hatchery with water and runs to the Ste. Marguerite river, a distance of ten acres.

The water of the Portage river is remarkably pure and clean, and very little difficulty is experienced in keeping the eggs perfectly clean while undergoing incubation.

I am pleased to report that our work of sending salmon fry and eggs to the Roberval hatchery since 1899 has undoubtedly shown good results. From different sources I know that there is now a great quantity of sea salmon taken in the splendid rivers of the Lake St. John and in the lake itself. When in the Lake St. John, the salmon has a great choice of beautiful rivers, such as Belle river, Mitabetchouan river, Suiatchouan river, Salmon river, Ashuapmouchouan river, the Mistassini river, the Grand and small Peribonca rivers, and many of smaller size.

The residents of this locality as well as the many visitors are loud in their praises of the work that is being done by this hatchery in the interests of the salmon fisheries, and the government should be congratulated on the success attending its fish breeding operations generally.

I have the honour to be, sir,

Your obedient servant,

L. N. CATELLIER,

Officer-in-Charge.

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17. GASPE HATCHERY.

GASPÉ, July 31, 1907.

Prof. E. E. PRINCE,

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report upon the work of the Gaspé hatchery during the past season.

On November 4 last, I went to St. John, N.B., for my quota of salmon eggs, and returned on the 11th, Sunday, and next day I got the eggs laid down in the troughs in first class order, with the exception of one case in which there was some trays with quite a few dead eggs; but I have never had as little loss during the incubation.

The fry hatched out very late this spring, I suppose owing to the extreme cold weather lasting so long, but they developed very rapidly after they hatched. I started planting them on July 8, but owing to the very high state of the rivers and the continued rain and storms, I only got finished on the 31st, and I am pleased to say never got fry out in better order, no doubt due to cool weather we have continually had. An officer of the hatchery was in attendance at one of the rivers each day, and the fry were planted as follows:—

River St. John (Douglastown)	355,000
“ York	350,000
“ Dartmouth	470,000
Total	1,175,000

After the distribution was completed last season I cleaned up the hatchery, painted and varnished all the cans, varnished all the trays and troughs with the varnish furnished last summer. A new chimney was also built last fall, which is a great improvement.

A few repairs to the hatchery are necessary, and will be made before the cold weather sets in.

There are also a number of dead trees, killed by the water, in the dam, which I will try and get removed if the water gets low enough, as they are falling and causing a lot of dirt to accumulate.

The trays, troughs, &c., will be cleaned as soon as possible, and everything put in readiness for next season's operations.

I have the honour to be, sir,

Your obedient servant,

R. LINDSAY,

Officer-in-Charge.

18. RESTIGOUCHE HATCHERY.

FLATLANDS, near Campbellton, July 24, 1907.

Professor E. E. PRINCE,

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to transmit herewith my annual report upon the operations of the Restigouche hatchery during the past year.

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As previously reported 340 very large fish were captured in the departmental net, and W. G. McBeath's licensed net, last year, for the stocking of the hatchery.

The stripping of the fish and collecting of eggs began on October 18, continuing the work until the first week in November, some 2,300,000 very beautiful eggs were collected, and deposited in fine condition in the hatchery, filling the troughs to almost their full capacity. These eggs were carefully cared for during the winter months, and period of incubation, not more than seven per cent of the eggs and fry being lost.

Distribution of the fry began on June 24, and was carried out in accordance with the following schedule :—

Restigouche river.. . . .	600,000
Upsalquitch river... . .	50,000
Metapedia river and lake.... .	1,450,000
Lake St. Flavie.. . . .	9,000
Held over in tanks by Matamagaw Salmon Club Causapscal.... .	10,000
Held over in pond and tanks at Flatlands hatchery... .	20,000
Total... . .	2,139,000

The fry held over at hatchery pond and tanks, and fed through the summer will be liberated in the Restigouche river in the autumn.

It has invariably been the custom to plant the larger number of the fry in the Restigouche and Upsalquitch rivers, both of which plainly show the results of the planting, over the Metapedia, but owing to the usual late spring and the great rainfall keeping the rivers in flood, it was found impossible to tow such large quantities of the fry as usual by scow, consequently we were obliged to distribute, and plant the greater number in the Metapedia river, which were conveyed in cans over the Intercolonial railway.

The retaining pond at hatchery was repaired last autumn by the erection of substantial concrete wall, and necessary piping set in. This pond is now working very satisfactorily.

Capture of Parent Fish.

The Tide Head pond was reconstructed in early spring, and the departmental net and J. McBeath's licensed net, set as early in June as possible, for the capture of parent fish for the pond. The two nets have taken 245 fish up to date, and as soon as a sufficient number are caught, the nets will be taken up. The conditions for catching stock fish have been very unfavourable; the June fish did not enter the river until July, and the river keeping in flood, it was impossible to work the departmental net satisfactorily, or with the usual results.

The department also leased the Dow Sheals licensed net, which was not necessary to set, and in order to catch three or four hundred fish, for the supply of the hatchery, your department have purchased outright, leased, and abolished, five stands which formerly sent a great many fish into the market, so that now there cannot be any fair criticism against the present method of capturing parent fish.

All plant, such as trays, troughs, &c., are being cleaned and revarnished and made ready for the reception of the ova this fall. A few minor repairs are necessary.

I have the honour to be, sir,

Your very obedient servant,

ALEX. MOWAT,

Fishery Officer.

19. ST. JOHN RIVER HATCHERY, N.B.

GRAND FALLS, July 30, 1907.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit the following report in connection with the operations carried on at the St. John river hatchery during the past season.

Acting on instructions from the department and a telegram from St. John, my assistant left for the latter place on November 1 of last year. On November 9 he returned with seven cases of 34 trays to each case, making 1,071,000 eggs. These were placed in the troughs in excellent condition. The cases were sent back to St. John, and on the 17th three more cases, containing 458,000, were shipped to us. These were met at McAdam Junction and were also put down in fine condition. This gave us a total of 1,529,000 salmon eggs. I might say that we turned out a splendid lot of young fry. The salmon fry were planted successfully in the following waters:—

Tobique river.	300,000
St. Croix river.	100,000
Salmon river	300,000
St. John river, below falls	250,000
Pond and stream near hatchery.	300,000
Chamcook lake.	80,000
Sent to St. John	35,000
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	1,365,000

In April of this year we received a visit from Mr. Finlayson, Dominion inspector of fish hatcheries.

Repairs.

In the fall of 1906, we had the hatchery repaired at considerable expense. These repairs consisted of the following: Reshingling the entire roof of hatchery, new sills, new floor beams and new floor, new wainscotting, a new main feed tank and new penstock, six new troughs and six new waste troughs. By putting new troughs in place of old whitefish tanks, we have now capacity for from two millions to two and a half millions of eggs.

After the visit from the inspector we received instructions to have all interior fittings put in first-class shape, which has been done, and the hatchery is now in readiness for next season's operations.

I have the honour to be, sir,
Your obedient servant,
CHAS. McCLUSKEY,
Officer-in-Charge.

20. MIRAMICHI HATCHERY.

SOUTH ESK., N.B., August 31, 1907.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit the following report on the operations at this hatchery during the past year.

At the time of forwarding the last annual report, which was dated August 28, 1906, the work of procuring the supply of parent salmon was just beginning. The number required for this hatchery was obtained in about ten days, and then, according to instructions from your department, an additional supply was obtained, the ova procured from these being intended for other hatcheries.

The netting of parent fish was completed on October 8, the total number placed in the retaining pond being 750, consisting of 430 females and 320 males. The collection of ova was commenced on October 23, and completed November 14. The fish were in splendid condition, and produced a total yield of 2,855,000 ova. On November 2 all the troughs in this hatchery were filled, 1,735,000 being placed therein. Previous to this date Mr. F. Burgess, of Windsor, had been notified that his hatchery would be supplied from the retaining pond here. He arrived with cases and trays on November 1, and returned to Windsor on November 7, with 720,000 ova, which he has since reported he placed in his hatchery with very small loss. After this number had been shipped to Windsor, there still remained a surplus of 400,000, which were placed in the hatchery here until instructions were received regarding their disposal. On November 29, according to telegraphed instructions, 200,000 were delivered to Mr. Findlayson, at Newcastle railway station for transfer to Charlottetown. Later on the balance was divided between the Ottawa and Windsor hatcheries.

The ova placed in this hatchery were successfully carried through the hatching period and produced 1,675,000 fry, which were distributed in the following waters:—

Northwest Miramichi.. . . .	650,000
Little Southwest Miramichi.. . . .	500,000
Main Southwest Miramichi.. . . .	200,000
Sevogle river.. . . .	175,000
Millstream.. . . .	50,000
Renous river.. . . .	100,000
Total.. . . .	1,675,000

Distribution was commenced on June 4.

Owing to very high water this season the fry were planted further up the rivers than the previous year. They were all liberated in good condition.

Shortly after the fry were planted, arrangements were made for beginning the work of building the new hatchery, which has been under consideration for some time. It having been decided to erect the new hatchery on the same site, the old building was removed and concrete foundation piers were built. This part of the work was very difficult and slow, as owing to the heavy rainfalls during the month of August the excavations made for the piers were continually filling with water. At the present date the frame of the new building is erected, and the rough boarding, lathing and shingling is being carried on as rapidly as possible. The new hatching troughs and tanks have been ordered from the factory, and the troughs will be thoroughly varnished before placing them in position. Owing to the energetic manner in which the work is being forwarded by the building foreman, Mr. P. A. Forsythe, I feel assured that

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everything will be in good order and in readiness to receive this season's supply of ova. Work on the dwelling-house for the officer in charge is also commenced. The excavation for basement and foundation is completed, and the framing will begin immediately. This building is being erected separate from the hatchery, and will be a great improvement over the old arrangement.

Preparations are now being made for procuring the supply of parent fish for this year. The inclosure in which the fish are retained in the pond at the hatchery, and which has to be removed every year, is now being placed in position. Some slight repairs will also have to be made to the dam and gateways of this pond. This work will be performed as soon as possible.

Following the instructions contained in the departmental letter of 22nd instant, arrangements have been made with four of the fishermen near this pond to procure about 700 parent salmon with which to stock this hatchery. As it has been found necessary to procure an additional number of parent fish to supply other hatcheries with ova, arrangements have been made to obtain about 600 or 800 at Tide Head, which is about twelve miles up river from the hatchery. An inclosure will be made at this point for the purpose of retaining these fish until spawning time. This will be built temporarily, but sufficiently strong to guarantee the safe-keeping of the fish. The ova will be collected at this pond, and can be transferred by boat to the railway for shipment.

In conclusion, I may add that in view of the improvements that will be made for carrying a large number of fry, in the new hatchery under construction, the success of the coming year's operations seems to be fully assured.

I am, sir, your obedient servant,

ISAAC SHEASGREEN.

21. SHIPPIGAN HATCHERY.

SHIPPIGAN, August 14, 1907.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to forward you my report on the operations of this hatchery for the past season. Female lobsters were in abundance this summer, and one hundred and fifty millions of eggs were collected by me, renewing over eighty jars as soon as they were emptied. I put several millions of eggs in a case made of wire mesh, which I anchored in the channel and exposed to the sun, so that the eggs hatched immediately. I used this process in order to retain some jars for the eggs collected at the end of the season, as these were of better quality than the first ones, which were delayed by the cold weather. All the eggs were hatched on July 18, and the hatchery closed July 23. We began our operations in the beginning of May, and we received the first eggs on May 10, but for fear of the ice we only started the pump on May 17, when the ice was all out. The cold weather caused more harm than last year, and did not permit us to distribute more than about eighty millions of small lobsters in the Bay of Chaleurs and Gulf of St. Lawrence.

The hatchery is now being painted, and some minor repairs being made.

I have the honour to be, sir,

Your obedient servant,

SEBASTIEN SAVOY,

Officer-in-Charge.

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22. SHEMOGUE LOBSTER HATCHERY.

CAPE BALD, September 25, 1907.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit the fifth annual report of the Shemogue lobster hatchery, and in doing so, I am pleased to state that we have again been very successful.

We commenced to get hatchery ready for operation on May 1, same as in previous years, and we were ready to put on steam on the 25th, the first day of the season.

On account of wind that prevented fisherman putting out gear, there was little fishing done till May 31.

Female berried lobsters were scarce for a few days, but when the weather got warm they became very plentiful.

We noticed the first fry in the tanks on June 19, and hatching came fast and regular. We gave them a large supply of water, as there was no storm to interfere, consequently the young lobsters developed rapidly, and were in a healthy condition when liberated.

Every visitor who came in was pleased with our work, and the hatchery has made a record for itself this season as regards good results. We collected 158,000,000 of eggs delivered at the hatchery in good condition.

We put out to sea on the usual ground, from near Cape Tormentine, east, to Caissy Cape, west, 126,000,000 healthy fry.

We gathered spawn from fourteen canneries, and I found that lobsters were plentiful, but of a rather small size, which leads us to believe that many were the product of this hatchery.

I am pleased to state that an abutment stone wall, facing the hatchery, and a crib in front of the boiler-room has been constructed which will protect these buildings from further undermining by the sea.

The pipes have been taken up, the hatchery thoroughly cleaned and everything laid away in readiness for next season's operations.

I have the honour to be, sir,

Your obedient servant,

NAP. S. LEBLANC,

Officer-in-Charge.

23. BEDFORD SALMON HATCHERY.

BEDFORD, N.S., July 24, 1907.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my report of operations at the Bedford hatchery for the past season.

About the first of November last I obtained at the St. John retaining pond 500,000 salmon eggs.

Speckled trout eggs were purchased at following places :—

Phinney's pond, Spa Spring, 80,000; Bulmer's pond, Sackville, N.B., 30,000.

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Those secured from Mr. Bulmer were mostly from hand-fed captured fish and did not hatch as well as those taken from fish direct from the pond. Ninety per cent of which hatched.

At the Phinney pond the water was low and muddy and the fish were weak, therefore the hatch of fry was not as large as if conditions were more favourable.

I am making arrangements for securing parent trout from some larger lakes fed by springs of pure water where the fish are large, and I hope to obtain better results.

The distribution of fry commenced on May 27 was completed on June 14, as follows:—

Salmon.

Bear river, Annapolis county	50,000
Lake Vaughan, Yarmouth county	25,000
Argyle river, Yarmouth county	25,000
Little lake, Yarmouth county	25,000
Roseway river, Shelburne county	50,000
Grand lake, Annapolis county	25,000
Pennant river, Halifax county	40,000
Indian river, Halifax county	40,000
Salmon river, Halifax county	40,000
Mackintosh river, Halifax county	80,000
Sackville river, Halifax county	40,000
Total	440,000

Speckled Trout.

Catamaran lake, Halifax county	1,000
Rocky lake, Halifax county	2,500
Lake Amiro, Yarmouth county	2,000
Lake Annis, Yarmouth county	2,000
Crawleys lake, Yarmouth county	2,000
Milton ponds, Yarmouth county	2,000
Lake Ellenwood, Yarmouth county	2,000
Little lake, Yarmouth county	2,000
Milford lake, Yarmouth county	2,000
Fales river, King's county	2,000
North river, King's county	2,000
Porter's lake, King's county	2,000
Grand lake, Annapolis county	2,000
Roseway river, Annapolis county	4,000
Isle Madam lake, Richmond county	4,000
Total	33,000

The water in the Sackville river being high this season, a large quantity of salmon have ascended and net fishing in the basin is being quite successfully prosecuted. Reports of good catches of salmon come in from all the rivers along the coast.

The hatchery is in a good state of repair.

The annual cleaning, renovating and painting of troughs and trays is being done.

The grounds approaching the front entrance have been levelled off, a stone wall and railing placed along the water front, a new fence erected along the front road and across the back lot, all of which adds to the appearance of the place.

I am, sir,

Your obedient servant,

ALFRED OGDEN.

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24. WINDSOR HATCHERY, N.S.

WINDSOR, August 22, 1907.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I herewith beg to submit my annual report for the past season.

In November, 1906, I received 700,000 salmon ova from Miramichi retaining pond, South Esk., N.B., and in April, 1907, 100,000 salmon ova from the same source. The above ova were laid down in good order in our hatching troughs, from which were hatched 721,000 fry, which were distributed as follows:—

Avon river,	Hants county.....	251,000
Meander river,	“	150,000
Hebert river,	“	50,000
Kennetcook river,	“	50,000
Cornwallis river,	King's county.....	50,000
Gaspereaux river,	“	50,000
Long lake,	“	50,000
Cloud lake,	“	50,000
Lake Roundhill,	Annapolis county.....	20,000

The above-named rivers have been the spawning grounds of salmon from time immemorial, and barring the pollution and obstruction of some of these by sawdust, there should be good results from stocking these waters.

Long lake, Cloud lake and lake at Roundhill are not as suited to salmon fry as are the other waters named.

The hatchery here is in first class condition, and the percentage of ova hatched shows that the water and other conditions are satisfactory.

I am, sir, your obedient servant,

FRANK BURGESS.

25. MARGAREE HATCHERY, N.S.

N. E. MARGAREE, N.S., August 3, 1907.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit the annual report of work prosecuted in Margaree hatchery under my direction during the season of 1906-7.

Early in November, 1906, as instructed, I proceeded to St. John, N.B., and procured the salmon ova, about 1,000,000, apportioned to this hatchery, and returned with them. Upon arrival they were without delay placed in the incubation troughs. They were in excellent condition. The dead ova, fewer in number than usual, were at once picked out.

About Christmas, in common with all streams in northwestern Cape Breton, a very severe freshet took place in hatchery river. Nothing approaching it in severity is remembered by the oldest inhabitant. For fully five days the hatchery was surrounded by a seething, turbulent mass of water, during which time we were unable to enter. At the time I gave you a detailed account of this flood and the damage in-

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flicted to the hatchery property thereby. The supply pipes were broken in many places, and thrown out of position, and much of the land washed away. Inspector Finlayson, who visited us at the time, had repairs made to render the buildings reasonably safe in the event of another such freshet, and had the supply pipes temporarily repaired. The ova were without running water from December 24 to January 14. During that time they were supplied with water by pump and at times by bucket. This was very laborious work, but I am pleased to state that the ova suffered none, but continued in first class condition through the period of incubation, with very small loss.

About April 20, hatching was concluded, and the resultant fry, numbering about 925,000 were during June liberated in good condition in the following streams, namely:

, Big Intervale, Margaree river, Inverness Co.	50,000
Black rock, Margaree river, Inverness Co.	50,000
Tingley's, Margaree river, Inverness Co.	50,000
Greig's, Margaree river, Inverness Co.	25,000
Hatchery river, Margaree river, Inverness Co.	50,000
Crowdis bridge, Margaree river, Inverness Co.	50,000
Cranton ferry, Margaree river, Inverness Co.	50,000
Rossville river, Margaree river, Inverness Co.	100,000
S. W. Margaree, Margaree river, Inverness Co.	100,000
Little river, Cheticamp, Inverness Co.	200,000
Strathlorne river, Inverness Co.	100,000
Middle river, Victoria Co.	50,000
Baddeck river, Victoria Co.	25,000
North river, St. Anns, Victoria Co.	25,000
Total.	925,000

The hatchery is now being cleaned, and the trays, supply tank, troughs, &c., varnished. New pipe is being ordered, and it is intended to have the old terra-cotta pipe replaced with this iron pipe. This work will be finished in time for next season's operations.

All of which is respectfully submitted.

I am, sir, your obedient servant,

ALEX. G. CARMICHAEL.

26. BAY VIEW LOBSTER HATCHERY.

August 1, 1907.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit the annual report of operations at this hatchery for the season of 1907, which I am pleased to say have been very successful.

After some preliminary work on the boiler, I commenced on May 1 to get the hatchery in readiness for the season's operation. This was the coldest and latest spring that has been known here for some years, the straits being blocked by heavy ice, which did not leave till May 20. No lobsters being taken in this vicinity till May 24.

I had steamer collecting ova as soon as the fishing commenced, and had her employed every day weather permitting till I had the hatchery filled.

On June 20, I had every jar in the hatchery filled with ova, all in first class condition.

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The weather continuing cold the fry were late hatching out, and it was not till July 1 that the first fry appeared. After that date they hatched out very rapidly and with great success, there being practically no bad eggs in the hatchery.

155 millions of healthy young fry were distributed west of Gull rock, Pictou island and in the bay outside of Cariboo and Pictou harbours.

During the winter the boiler at the hatchery was thoroughly inspected and tested and some repairs were made, and both engine and pump gave good satisfaction this season.

Early in June the water in our wells gave out, and for the remainder of the season I had to have most of the water used in the boiler hauled to the hatchery.

At the end of the season I had the outside of the hatchery painted white, which greatly improves the appearance of the building.

The hatchery was closed July 27, leaving everything clean and in good repair.

I have the honour to be, sir,

Your obedient servant,

W. F. HARRIS.

27. CANSO LOBSTER HATCHERY, N.S.

CANSO, N.S., August 12, 1907.

Prof. E. E. PRINCE,

Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my third annual report for the season of 1907, and beg to say that on April 25 I started work at the hatchery, taking advantage of the spring tides which happened about that time, to do some necessary work at the salt water well.

On May 7 we started the pump with eleven millions of eggs in the jars. We collected from ten factories.

During the month of May we collected forty-six millions of eggs, and I was in hopes of getting a much larger quantity during June, but on the 5th of that month an easterly storm arose which lasted, with a very heavy sea, until the 11th, destroying so many lobster traps that a great many of the fishermen had to abandon the business for this season. However, we continued collecting eggs until the last of June, and succeeded in getting eighty millions.

During the storm referred to above we had a great quantity of dirt to contend with, brought in by the pump; but as the eggs were not then much developed it did not seem to injure them.

The first young lobsters appeared in the tanks on July 10, eight days later than last year; this was on account of the temperature of the water keeping down longer. At this time the eggs were in good condition, with scarcely any dead ones in the jars, and from the 18th until the 26th the young lobsters hatched very rapidly. On the last-mentioned date another easterly storm, occurring just on the spring tides, was the cause of a greater quantity of dirt than usual coming in. The troughs and tanks were continually overflowing, so much so that during the night we had to take off the strainers and let the young lobsters run into the harbour, as we would have killed them sweeping the strainers. We lost some eggs in this storm which were just about developed and could not then stand much dirt.

In all we hatched sixty millions of young lobsters and distributed them in the vicinity of the factories, from which we collected eggs. On July 31, we distributed the last and after the necessary cleaning and painting closed down.

I may say that we had some delay in getting the hand-pump for the fresh water well, but as rain was plentiful this season, we had to buy a small quantity of water.

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I beg to say further, that something should be done before another season, to improve our salt water well, so as to prevent so much dirt from getting to the pump, as should a storm occur just at the time the eggs are developed, it might mean the loss of the season's work.

I have the honour to be, sir,
Your obedient servant,
JAMES MEAGHER,
Officer-in-Charge.

28. KELLY'S POND HATCHERY, P.E.I.

WINSLOE, P.E.I.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit the following report of the operations at Kelly's Pond hatchery, and I am pleased to say that we have had a most successful season. On November 9, I went to St. John, N.B., and secured five hundred and ninety thousand (590,000) salmon eggs, which were placed in the troughs in fine condition. On December 14, Mr. Finlayson, inspector of hatcheries, brought me two hundred and thirty thousand (230,000) eggs, which completely filled the hatchery. After giving the eggs a thorough picking we had scarcely any dead ones during the remainder of the hatching season. The water kept very clean during the winter, so that we had very little washing to do, a great improvement on last year.

On February 9 the eggs began to hatch, and early in March were all out. The hatching dam has kept in good order since it was repaired two years ago. The hatching and dwelling house are in good repair, both having been painted this season. A fence has also been erected around the grounds, which is also a great improvement.

The fry were distributed in the following rivers in fine condition:—

Morell river, King's county	140,000
Midgell river, King's county	140,000
Fortune river, King's county	60,000
Murray river, King's county	60,000
Winter river, Queen's county	160,000
Black river, Queen's county	60,000
Wheatly river, Queen's county	60,000
Dunk river, Prince county	80,000
North river, Queen's county	30,000
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	790,000

I am, sir,
Your obedient servant,
A. W. HOLROYD,
Officer-in-Charge.

29. WINSLOE LOBSTER HATCHERY.

WINSLOE STATION, August 3, 1907.

Prof. E. E. PRINCE,
 Dominion Commissioner of Fisheries,
 Ottawa.

SIR,—I beg to submit my report of the operations at Blockhouse Point lobster hatchery for the season of 1907.

The spring opened later this season than for many years past. The first spawn collected was on May 24, a month later than usual; but I am pleased to say we collected a much larger amount of spawn than last year. The fry first appeared in the jars on June 27, and continued hatching splendidly up to July 16. They were distributed in splendid condition. I did not see a dead lobster in the barrels or in the hatchery. I am pleased to say that the packers speak in the highest terms of the good work done at the hatchery.

Never before were there so many lobsters seen. Eighty millions of fry were planted in the following places:—

Argyle shore.	5,000,000
Canoe cove.	10,000,000
Southwest reef, St. Peter's island.	10,000,000
Southeast bar, St. Peters island.	10,000,000
Keppoch reef.	5,000,000
Seal rock, Government island.	20,000,000
Point Prim.	10,000,000
Middle ground.	10,000,000
	<hr/>
	80,000,000

The hatchery has been painted and the whole plant is in a splendid state of repair, with the exception of the wharf which is a very exposed situation and will require some repairs before next season's operations commence.

I have the honour to be, sir,

Your obedient servant,

A. W. HOLROYD,

Officer-in-Charge.

30. FOURCHU LOBSTER POND.

The following report on the operations at the Fourchu Lobster Pond during the past season is taken from the reports of Fishery Officer H. C. V. Levatte, of Louisbourg, who was authorized to supervise the work and from various reports on the files of the department:—

'The drift-ice seriously retarded all fishing operations in Cape Breton up to June 5 and Gabarus bay was blocked with it. Indeed, 1,500 lobster traps were destroyed in the first week in June at Fourchu by the ice. Lobsters, however, were quite plentiful, and over 14,000 lbs. weight were landed from 300 traps in a few days in May at Mr. H. F. Baker's factory at Fourchu—the best fishing known in the district for the past ten years.'

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The lobster pound was considerably damaged by ice during the winter, but Mr. Baker thoroughly repaired it at considerable cost; also divided it into more compartments, there being five separate inclosures instead of three, as originally built for the lobsters. Fewer lobsters were thus placed in each compartment, and on June 10, 3,000 seed lobsters were in the pound in the best condition. Later seed lobsters were impounded in batches, the total for the season being 43,905. On July 10 and 11, 21,460 seed lobsters were deposited in the waters off Red Head in excellent order and condition, and the death rate in the pound was reduced to a minimum, but owing to the low temperature (the highest being 53° up to July 13) no fry were developed, and only about 5 per cent were in an advanced state. Mr. Hardy, the assistant, daily attended at the pound, looking after the feeding, taking out and depositing of the lobsters, and the removal of dead ones. All due vigilance and care were exercised. On July 24, the lobsters placed in the pound were reported as 'in prime condition,' the temperature of the water not exceeding 56°, and the first lobster fry were noticed on July 20, the latest date since the pound has been operated, and the stage of advancement in the seed lobsters is fully 21 days behind previous years, owing to the coldness of the water.' On August 8, 22,449 seed lobsters were taken out of the pound and released in the waters of Cape Breton and Richmond county coast, thus making a grand total of 43,905 seed lobsters liberated, after being impounded and held during the open fishing season.

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ANNEX C.

REPORT ON OYSTER CULTURE BY THE DEPARTMENT'S EXPERT FOR
THE SEASON OF

1907.

C. G. S. 'OSTREA,' CHARLOTTETOWN, P. E. ISLAND, October 30, 1907.

To Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit to you my annual report on oyster culture of last season's work in the lower provinces.

Murray Harbour, P.E.I.

As soon as navigation opened, which was very late this year, I proceeded to Murray harbour on the 21st May, passing through miles of drift ice on my way there and commenced work on the beds by removing the eelgrass growing there. Work continued until the 16th July, when the bed was found to be in a clean condition. After finishing raking over the area, I had three hauls with the dredge on different parts of the bed with the result of catching fifty-six, seventy and seventy-one oysters respectively. The oysters are large and well grown. I did not notice many small ones amongst them, but it is reported that several small oysters are to be found scattered around the shores and islands in the vicinity near low water mark, which the fishermen maintain were not growing there before this area was planted, although I had no opportunity on this occasion of seeing them myself, devoting my whole attention to the bed, but have seen them on my former visits. The eelgrass appears to grow very thick on this bed and requires a large amount of labour to keep it clear, in fact the whole river and flats are covered with it and no doubt the seed drifts on the clear bottom and finds a suitable resting place. After finishing my work here I proceeded to the Bras d'Or lakes and made an examination of the areas there.

Bras d'Or Lakes, C.B.

On my arrival here I made a careful examination of the areas in the vicinity of Orangedale and Malagawatcht bays, River Dennis, Seal cove and Estmere bay, which comprise the waters both inside and outside of Little crossing, also the coves, rivers and shores of the several islands situated within the above waters.

Malagawatch bay consists of a sheet of water about five miles long and a little over one mile wide. It is almost landlocked and is protected from storms from every direction owing to the land being heavily wooded. The eastern end is shallow and oysters were comparatively scarce here, although a few were found all round the shores, the bottom is sandy and the shores stony. There is quite an extensive flat here, in from five feet water gradually deepening to ten feet water. I tried several hauls of the dredge and found the bottom to be thickly covered over with mussels and eelgrass, the bottom was firm and sandy, and the shores on both sides form part of the Indian

reserve. From the burying ground on the south side of the bay up to the head, oysters were found to be much more plentiful and about half grown in size.

On Stony point, at the entrance of Malagawatch bay, is a flat or point of land running out from the shore for about half a mile with a firm sandy and gravelly bottom clear of eelgrass, and small oysters are growing over this area in large quantities. There is a strong tide running over this point as the entrance is very narrow, very few full grown oysters were found here. This area is shallow with clear water, the larger ones no doubt were evidently caught last fall. From Stony point to McLean's cove (opposite Plaster island) on the north side of the bay oysters were very scarce, and from McLean's cove to the head of the bay oysters were growing in larger quantities, but small in size.

At the head of the bay there are several small islands, and this area covers a large tract of shallow water, about two miles long and one mile wide, with a clean sandy and gravelly bottom thinly covered with weeds and eelgrass, (this is the chief fishing ground in this district) and men come for miles all round and make this their headquarters during the oyster fishing season, where large quantities are caught annually, and there is a large number of healthy looking small oysters laying over the whole area where a rake can find a bottom. Seal cove and Mill brook would be about one mile deep, situated at the northwest corner of Malagawatch bay, oysters are found scattered in very fair quantities all round the shores with a varying width of from fifteen to sixty feet. In the middle of this cove the bottom is softer and the current is not very strong. At the southwest corner of this bay the River Dennis empties itself, and the soil at the western part of the bay is composed of a sandy and gravelly bottom. Oysters are scattered in very fair quantities over the whole area in a depth of water varying from eighteen inches to twelve feet. The distance from the shore varies from ten to two hundred yards, according to the nature of the land; in some places it is flat and deepens gradually, at others the water deepens suddenly. The size of the oyster increases as the water gets deeper; this is owing to the larger area of ground they are growing on, consequently the greater difficulty in fishing them.

In River Dennis oysters are fished both below and up to about three miles above the bridge. They are not so good in quality owing to the large amount of fresh water continually running down. The bottom is muddy and of a softer nature, the oysters grow very irregular in shape; the shells are white in colour and soft, thin and brittle. This, no doubt, is caused by the water being so brackish and the nature of the bottom; several of these oysters are found attached to sunken trees and logs.

On the south side of the upper part of the bay is an extensive flat called McLean's marsh, about half a mile in length, and varying in width from seventy-five to three hundred feet, laying between the mouth of River Dennis and McLean's cove, where oysters are found to be thickly scattered over the whole bottom in a depth varying from eight or ten feet on the outside into low water mark. The bottom is composed of a sandy and gravelly nature with eelgrass growing very thinly on the bottom. The shore there runs down to McAulay's cove, a distance of nearly two miles, and oysters are found all along the shores on all the points and spits of land and in the coves. Off McAulay's shore there is a flat of about an eighth of a mile square with a varying depth from four to ten feet. The bottom is firm, but upon examination it was found to be covered with mussels and eelgrass. There are two islands along this shore with a channel between carrying a depth of thirteen feet with a soft muddy bottom.

Orangedale bay is about three miles long and three quarters of a mile wide where several coves are formed around its shores, and oysters are taken from them as well as from the shores of the bay itself. Among them are Morrison's cove, nearly a mile wide on the eastern end of the bay, where large quantities of small oysters are found with large ones scattered around. The middle of this area is much shallower than at the sides and forms a middle ground where oysters are growing plentifully over the

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whole area, also all round the shores. The bottom is covered in most places with eelgrass and other seaweeds, with a slight coating of mud over a sandy bottom. There is very little current in this cove. One haul with a small hand-rake (seven inches by ten) we found one hundred small oysters, with other hauls of smaller numbers, seventeen, twenty-three, and so on. This rake only scratches over about two square feet of ground at each haul, at a depth varying from three to ten feet water. In Gillis' cove, which is about a mile deep, with irregular coastline, small oysters are found scattered all along the shores. In one haul we counted one hundred and fifteen small ones. Where any clean points of land project under water it was generally found to be covered with small oysters. In Martin's cove, which is nearly a mile deep, oysters were thickly scattered over the eastern side, and thinly on the opposite side of the cove. At McNeil's island on the outside of the cove, on the western side of island, small oysters were found to be scattered all over the flats; also along the south side of the bay opposite the island. From Martin's cove to Gillis' cove, on the north side of the bay, oysters were found to be scattered all along the shore.

In McKinnon's harbour oysters were very scarce, only found a few in some of the coves.

On the eastern shore leading up to the Little crossing, small oysters were found on the points and in some of the coves, also the same on the western side, but very few were found in the coves. On the spit of a small island leading to the Broom, we found it practically covered with small oysters. There is a small strip of ground on the western side of the bay outside of Little crossing not very wide and varying in depth from four to ten feet water with a firm bottom. It is covered with mussels and eelgrass and as the water deepens so the bottom softens. It is very difficult to find much ground suitable for cultivation.

Inside the Little crossing or Estmere as it is now called, is a tract of water about two miles in length and a quarter of a mile wide with a very irregular coastline as it is indented with coves all round, both the coves and points of land around the shores are practically covered with small and half grown oysters laying in shallow water from one to five feet deep and varying in width from ten to fifty feet. Forty-three half grown ones were taken by one haul of the rake, and several others made as good a showing. The bottom is firm with a thin coating of mud or sediment on the top. Eelgrass appears to grow all round here, there is very little tide and the water was very clear so that the bottom was visible where the oysters were growing. The extents of these areas are difficult to estimate owing to the irregular coastline which surrounds the lakes and bays, there being so many creeks and covers where oysters are found. The above areas therefore are approximate ones, the measurements are taken from an admiralty chart printed on a small scale.

The number of oysters seen during this examination is far in excess of any of my previous visits, and there is every prospect of a good catch during the next two seasons as the small ones are very numerous.

The soil consists chiefly of a sandy bottom with a slight coating of mud on top deposited by the currents and freshets. Along the shores where the oysters find a resting place it is generally of a stony nature, where the earth has been washed away leaving the stones clean with sand underneath.

The eelgrass which grows here in the locality of oyster growing areas, acts as a spat collector, as the spat attaches itself to the weeds while in a floating condition and grows until it sinks the eelgrass to the bottom, and it is by this means the oyster supply is preserved from year to year. I am informed upon good authority that each fall when gales of wind occur, windrows of eelgrass are thrown upon the shore literally covered with young oysters.

A large quantity of this spat could be obtained and raised artificially (placing the same in trays) by private parties if they had the ground to transplant them until it would grow large enough to take care of itself. The oysters here grow very fast owing to the shallow water they are laying in, but the water is much fresher throughout the

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lakes than either the waters of New Brunswick or Prince Edward Island owing to the mountainous nature of the land which surrounds these waters. I am of the opinion that if these oysters were transplanted to waters of a greater density it would naturally improve both the oyster and shell. The current as a rule is generally sluggish, and fresh water drains from the mountains the whole season, which retards the flow of salt water on these areas during the incoming tides.

The number of oysters taken from these areas is difficult to obtain as fishermen come from all parts of Cape Breton island and Nova Scotia to fish here. Last season some five hundred barrels oysters were shipped from Orangedale station, and the station agent informed me that last year was considered a poor year. Then others are taken away by schooners to various points such as Halifax, Sydney, St. Pierre and Newfoundland and no record obtained as to their destination.

I am of the opinion that very little could be done to improve these areas, or the quality of the oyster. If the eelgrass were removed from these beds it might stop the future supply of spat, and that would not change the salinity or colour of the water which I am fully convinced is the whole cause of the oyster showing the black margin round the mantle, also the softness of the shells, both of these items are detrimental to the commercial value of the oyster as they will not stand transit without loss and damage by breakage.

Caraquet, N.B.

After finishing my examination in the Bras D'Or lakes I proceeded to Caraquet, arriving there on the 5th September, and have continued working on the oyster beds when weather permitted, removing the eelgrass which is growing over the area up till the 18th October, when the weather became so rough it was impossible to do any more work I concluded to suspend operations for the season. These beds cover an area of about one and a half miles long and about one mile wide. The water is very shallow, in some places, it is only possible for me to work at high water time and at low water time I cannot work on the beds at all. There is a large quantity of eelgrass growing on this area which could not be removed this season, and the condition of the beds are dirty. The weather has been exceptionally boisterous the whole of the season which has retarded my work to a great extent, not only here but elsewhere, and in all my experience I have never met with such bad weather as I have this season, but I have taken advantage of every opportunity that offered. It is estimated the catch from these beds this season will aggregate about four hundred barrels before the close of navigation.

I sailed from Caraquet on October 21, but owing to the tempestuous weather did not arrive in Charlottetown before November 2, where I will place the *Ostrea* in her winter quarters after removing the gear from her.

SHEDIAC BAY AND QUAHAUG FISHING.

After some correspondence and acting under instructions from your department, I proceeded to Shediac on June 1, and placed stakes around the oyster beds at a distance of two hundred yards from the corners of the beds, the fishermen fishing quahaugs outside the line of stakes. Persons fishing for quahaugs use both tongs and rakes with longer teeth than are necessary for the fishing of oysters, as the former fish burrow in the mud. When the rakes or tongs are brought to the surface the mud is washed from the rakes before the quahaugs can be picked out, consequently there is a heavy sediment carried by the tide and settles over a large area from the boat, and when this method is carried on daily by hundreds of fishermen, it can easily be realized that a heavy coating of mud will soon be found covering an oyster bed if fishing is permitted to be carried on too near the beds, which will take but a very

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little while to exterminate the oysters by smothering them. I have examined oysters taken from the immediate vicinity of where quahaug fishing was permitted on Prince Edward Island, and found a heavy coating of mud encircling the mantle of the oyster, which would shortly cause death to take place. Satisfactory arrangements appear to have been made in New Brunswick respecting the quahaug and oyster fishery, but am of the opinion that both oysters and areas have been destroyed in Prince Edward Island by indiscriminate raking for quahaugs too near the oyster beds, with fatal results to the latter, and I would respectfully urge the department to reserve some areas exclusively for oyster fishing such as Grand river, where there has never been a failure of oysters until this year, which I attribute to the quahaug fishing. No quahaug fishing should be allowed here above the ferry wharfs unless they are taken by oyster tongs when fishing for oysters, and then these boats should be limited to the quantity taken daily, say not to exceed one bushel of quahaugs per day. The same to apply to Bideford river, where no quahaug fishing should be allowed above Lennox island and McLean's point, on Lot 13, as it is plainly to be seen that quahaug fishing has had a serious and deadly effect upon the oyster industry, and at the rate the fishing is carried on, I am of the opinion it will not be a great while before the quahaug will also be scarce in some of these localities.

CLOSE SEASON AND SIZE LIMIT.

The season in which oysters are now taken commences on October 1, and closes with navigation; this, I believe, under the present conditions, gives general satisfaction, as oysters are reported to be very scarce this season. The size limit (3 inches) has also met with general approval, as oysters under that size are really too small for marketable purposes, and by allowing or leaving the smaller ones to remain on the beds until the following season, they have then grown to a fairly marketable size.

OYSTER BARRELS.

I would again respectfully call the department's attention to the different sizes of barrel that oysters are shipped to market in, and all sold as a barrel of oysters whether they are large or small. Formerly oysters were shipped in the regular flour barrel, and that has been the recognized measure for a barrel of oysters, and a large quantity are shipped to-day in the flour barrel, while others use an apple barrel, and again others will withdraw a stave or so from the regular flour barrel, until a person really does not know what he is buying when ordering a barrel of oysters. The flour barrel is much the easiest and cheapest to obtain, but merchants and buyers require a standard size to be recognized by law to prevent fraud. Whether the measure is large or small they care not, but an Act should be enforced relating to a standard measure for oysters to protect buyers and merchants from being deceived in their purchase.

The dimensions of an ordinary flour barrel are about as follows: Seventeen inches top and bottom, diameter with two inches bilge, and twenty-five inches deep on the inside, and to contain nothing less than ten pecks. This is a very important matter and I would respectfully ask the department to take immediate action without further loss of time.

PRIVATE CULTIVATION.

If some definite arrangements could be entered into with the provincial and federal governments, whereby persons could secure an area of ground and cultivate it privately it would prove a great source of revenue in a very short time to those interested in it if properly handled. Oysters are now becoming so scarce that the demand far exceeds

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the supply, consequently our beds are becoming slowly but surely depleted, and if no assistance is given they will soon be a thing of the past. If, however, private areas were in existence dotted over different parts of the bay, the spat from these beds might be carried to the natural beds by the currents and be a means of keeping up the supply of both public and private areas.

Oysters might be permitted to be obtained from shallow points and sands or ground drying at low water or where the spat has been deposited at a depth where they can be picked by hand, but on no account would I allow any small oysters to be taken from public beds to stock private ones. Or if some of these small oysters that are to be found on the ebb dry could be transplanted to the natural beds it would certainly prove very beneficial to those interested in the industry.

I have the honour to be, sir,

Your obedient servant,

ERNEST KEMP,

Oyster Expert.

APPENDIX No. 12.

ANNUAL REPORT ON BAIT COLD STORAGE FOR 1907.

SIR,—I beg leave to submit to you the eighth annual report on bait cold storage for the Maritime Provinces for the year 1907.

The past year has not been so busy a time in the erection of bait freezers as the two previous year, however their number are gradually increasing.

We have completed twelve new freezers since my last report was sent you; two of these were of the large type, being 100 ton freezers, one at North Sydney, called the North Cape Breton, and the other at Pictou; both of these are in Nova Scotia. The other freezers built and completed so far during the past twelve months, are at South bay, Ingonish, New harbour, Larry's river, Alder point, C.B., and Harbour Bouché, in the province of Nova Scotia. Only one has been completed in the province of New Brunswick, at Shippigan island. Four in the province of Quebec, being Newport point, Carleton centre, Point Basse, and South beach, the latter two on the Magdalen islands. We are now at work building one at Little Lamecque in New Brunswick, one at Lingan, C.B., while we are increasing the capacity of two others at Big island, Pictou, and at Petit de Grat, county of Richmond.

We are just now about to start a 100 ton freezer at Glace Bay, C.B. There are a number of other sections on the Gaspé coast where we expect to build at an early date.

The following is a complete list to date of the number of freezers completed, with the year they were built, the cost of the same and the number of bonuses paid, &c., as follows:—

BAIT FREEZERS.

PROVINCE OF NOVA SCOTIA.

Name.	Year Built.	Cost of Construction.	Department Share.	No. of Bonus Paid.	Amount.
		\$ cts.	\$ cts.		\$ cts.
Ballantyne's Cove.....	1900	1,361 04	861 04	5	369 06
Point Hood Island.....	1900	1,313 60	656 80	4	268 00
Bayfield	1901	1,905 89	952 94	5	470 00
Gabarouse.....	1901	1,982 82	991 41	3	251 50
Whitehead.....	1901	963 41	481 70	3	228 45
Point Bickerton.....	1901	1,043 08	521 54	4	256 50
Sambro.....	1901	2,246 66	1,000 00	3	300 00
Point La Tour.....	1901	1,330 03	690 01	0	Sold
Clarke's Harbour.....	1901	1,202 88	601 44	3	206 00
Lower E. Pubnico	1901	2,061 39	1,000 00	1	48 00
Sandy Cove.....	1902	1,427 34	713 67	4	392 00
Ingonish.....	1902	1,604 33	797 16	3	114 05
Cheticamp.....	1902	1,277 42	638 71	1	100 00
Eastern Harbour.....	1902	1,491 02	745 51	4	382 52
Petit de Grat	1902	1,515 95	757 97	5	490 25
Westport.....	1903	1,600 00	800 00	2	151 50
North Sydney	1903	2,038 89	1,000 00	2	194 00
Ketch Harbour.....	1903	1,401 89	700 94	2	200 00
La Have.....	1904	2,260 81	1,000 00	2	152 00

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PROVINCE OF NOVA SCOTIA—*Concluded.*

Name.	Year Built.	Cost of Construction.	Department Share.	No. of Bonus Paid.	Amount.
		\$ cts.	\$ cts.		\$ cts.
St. Peters.....	1904	2,036 05	1,000 00	2	103 05
Half Island Cove.....	1904	1,816 87	908 43	3	300 00
Lockeport.....	1905	1,788 66	894 33	1	57 10
Louisburg.....	1905	2,290 16	1,000 00	1	80 85
Drum Head.....	1905	1,649 37	824 68	2	200 00
Quoddy.....	1905	857 73	428 86	0	.....
Big Island.....	1905	1,013 32	506 66	1	60 55
Arisaig.....	1905	1,064 16	532 08	1	100 00
Digby.....	1906	4,441 38	2,000 00	1	100 00
Lunenburg.....	1906	4,544 76	2,000 00	1	100 00
South Bay Ingonish.....	1906	1,551 76	775 88	1	100 00
Half Island Cove.....	1906	2,273 57	1,000 00	1	100 00
North Cape Breton.....	1907	4,142 30	2,000 00	.....	.....
Pictou.....	1907	4,285 27	2,000 00	.....	.....
Larry's River.....	1907	1,831 84	915 92	.....	.....
New Harbour.....	1907	1,886 52	943 26	.....	.....
Alder Point.....	1907	2,251 08	1,000 00	.....	.....
Harbour Bouché.....	1907	1,728 62	864 31	.....	.....

PROVINCE OF NEW BRUNSWICK.

Shediac.....	1902	1,210 18	605 09	4	400 00
Caraget.....	1906	1,816 12	908 06	1	100 00
Shipriggan Island.....	1907	1,776 53	888 26	.....	.....

PROVINCE OF PRINCE EDWARD ISLAND.

Frog Pond.....	1900	1,160 18	580 09	5	345 35
Alberton.....	1900	1,347 67	673 83	5	450 00
Souris.....	1901	2,064 39	1,000 00	2	23 85
Miminegash.....	1902	840 46	420 23	5	500 00
Rustico.....	1903	1,235 00	617 50	3	300 00

PROVINCE OF QUEBEC.

Bonaventure River.....	1903	1,416 05	916 02	4	355 52
Caplin.....	1904	879 38	439 69	1	97 00
Anse à la Barbe.....	1905	961 12	480 56	2	166 62
Paspebiac.....	1905	1,690 83	845 41	1	98 75
Etang du Nord.....	1905	1,729 80	864 90	1	81 00
Cabin Cove.....	1906	1,801 13	901 56	1	100 00
Maria Capes.....	1906	1,630 46	815 23	1	62 00
St. Godfroy.....	1906	1,747 01	873 50	1	100 00
Gascons.....	1906	1,695 42	847 71	1	100 00
Bonaventure East.....	1906	1,002 81	501 40	1	100 00
Newport Point.....	1906	1,619 59	809 79	.....	.....
Carleton.....	1907	1,993 81	996 81
Point Basse.....	1907	2,552 32	1,000 00
South Beach.....	1907	1,952 47	976 23

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The following reports from the different freezing stations will give you a better report than I could possibly send you, and from them you can draw your own conclusions.

PRINCE EDWARD ISLAND.

Frog Pond, P.E.I.—The secretary reports as follows:—‘I beg leave to report our fishing operations to date in this neighbourhood for the year. The fishing started late, ice laid on our shore until May 20. Herring quite plentiful; lobster fishing better than for quite a number of years past. Codfish struck in later than usual (June 8), fishing not so good as we have had for the last five or six years. Dogfish struck in about July 10; August 8 they were so plentiful that the hake fishing was broken up; we have had the best mackerel fishing that we have had for a number of years, both in nets and with hook and line; boats with three men have taken as high as 1,700 fish in a day; for the past fortnight men have averaged 150 mackerel daily; these fish are worth 4 cents each when landed fresh. Boats out to-day, and if weather holds fine men will likely do a fine season’s work; a good many of the fishermen have landed over \$100 worth of mackerel already. We did not freeze any bait this season; fishing started late and everything came with a rush; help could not be secured; we could scarcely get enough help to secure the lobsters, which is the most important part of the work here.’

Alberton, P.E.I.—The secretary reports as follows:—‘Replying to yours of the 27th instant, I may say that we had our freezer in operation for three months this year. We froze about 80 barrels of herring, and had no difficulty in selling them, in fact we could have sold more if we had had them. The freezer did satisfactory work but is too expensive to run, that is to say, it will never make any money for any one.’

Miminegash, P.E.I.—The secretary reports as follows:—‘The present has been a very poor year for the freezers in this section owing to the fact that mackerel has been very plentiful, frozen bait was not needed, as fishermen while they find fresh mackerel, will not use frozen bait for their trawls, and at no time since 1891 has mackerel been so plentiful on our coast, in fact since the first week of June, when the fishermen began taking them, up to the present time there has always been sufficient mackerel for baiting trawls and moreover I have never to my knowledge known mackerel to take the hook so freely in August, as at the present time.

So you can see by this that frozen bait is virtually out of the business, but still at the same time another season it may be that our fishermen will realize the boon the freezer bait will be to them. Trusting that this will be of some service in regard to the utility of the government continuing to bonus freezers, as they cannot get along without it.’

Rustico, P.E.I.—The secretary reports as follows:—‘In looking over this season up to the present time, in regard to the freezer it has been most satisfactory. In May and June we froze our herring, which has proved to be of great value to our fishermen for the mackerel fishing, in fact without it very little would have been done, there has been very good mackerel fishing so far, and we hope the best is yet to come. One week of good fishing will clean out the freezer. We froze a lot of mackerel in July, which turned out fine, besides this we saved quite a lot of lobsters for the packers during their heavy fishing, so you can readily see that our freezer is of the very greatest benefit to Rustico; if the squid strike in we intend freezing a lot.

Our freezer is in good condition and does its work perfectly; there is no longer any doubt in the minds of the fishermen as to the value of frozen bait, and the great value of the freezer to freeze and keep bait in perfect order for use is now fully established. Thanking you for your kind help and attention to us in the past as also

the government for the assistance which they have given us in building and running the freezer.'

Souris, P.E.I.—The secretary reports as follows:—

'Answering your inquiry as to the fishing in this locality for the present season, I may say the herring fishing was good, lobster fishing much above the average catch. Codfish was about five weeks later than usual, putting in an appearance, after that fishing was only fair, the bulk of the fish being very small; hake fishing good. Bait fairly plentiful all season; there were 1,200 crates stored in freezer; this added to the daily catch of herring and mackerel supplied the fishermen with plenty of bait. Herring fishing much better than last season, lobster fishing much better than last season, codfishing about half as good as last year, hake fishing better than last year, mackerel fishing better than last season.'

NOVA SCOTIA.

Big Island, N.S.—The secretary reports as follows:—'The spring of 1907 opened cold and backward, ice remaining on the coast until the latter part of May, notwithstanding we obtained an average catch of herring, which proved a great benefit to the fishermen of this place.

One fisherman going out with one dozen of herring returned with three hundred and fifty codfish. I could retail several instances where they proved of equally as much benefit. I have also frozen large catches of salmon for the native fisherman, which has brought them all to see the great benefit to be derived from it.

I also opened a fall market for eels, which they were unable to handle before, until the ice would form, and now they can handle them from the first of September.'

Ballantyne's Cove.—The secretary reports as follows:—'I may state at first that the catch has not been equal to last season, being about one-third short; this did not occur owing to scarcity of bait, as we had a full supply in our freezer, but owing to fresh bait being obtainable for most of the time, the freezer bait was not used as much as usual, the scarcity of fish was the main cause for the shortage, and the fish being very late in coming this season. The trouble with our freezer is that we have not large enough place for storing ice, and when the season is late our ice runs short; we had very good bait this season; we believe strongly that the freezer is the great source of the earning power to our fishermen, and would strongly recommend it to all. Our lobster catch was equal to last year, although very late in opening, and the supply of freezer bait greatly assisted in making the catch good.'

Arisaig, N.S.—The secretary reports as follows:—'I beg to state that we had complete success with the freezer this year; last year being our initial year with frozen bait, we were not quite as well posted in freezing and preserving bait, while this year, owing to the experience obtained, our bait came out just in as good condition as it was put in. We have tested frozen bait side by side with fresh mackerel on our trawls, and could detect no difference in the catch of fish. The bait was frozen by salt water ice too this year, while last year we had fresh water ice; of course, it takes rather more of the former ice to last through the season, but it does the work equally as well. We began using frozen bait on June 15 and still have a quantity remaining. On the whole, although the spring was unusually late, the catch of all kinds of fish is in advance of last year.'

Harbour Bouche, N.S.—The secretary reports as follows:—'Last winter we filled up the freezer with fresh water ice, but the quantity at present left is very small, and there was not much waste from melting, at least not as much as anticipated. The herring were caught somewhat late last spring and in limited quantities, although we succeeded in filling up the freezer to its utmost capacity. The frozen herring proved

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excellent for cod, haddock, hake, and the catch of same was larger than for years past, which is probably the result of the fishermen having good bait for their trawls. Although many shareholders think that the freezer was not of any benefit to them this summer, I, for my part, fail to see why it hasn't benefited them, as I notice that they have caught more fish this year than usual, and I do not think this was an exceptional year at all. My belief is that the good frozen bait used by the fishermen has improved the fishing here this summer, and nothing else, for there were a few outsiders who fished out of this place, and they all did better than last year. The greatest trouble which the association has to face at present is to get a market for frozen herring, as there seem to be lots everywhere, and, although we are offering them at sacrifice prices, they are moving very slowly, but we hope to dispose of them before the ice is all gone. That is the worst feature in our association to-day, and were it not for that, we would have got along very nicely this year, but we hope and expect that the freezer will turn into a paying and benefiting establishment.'

Port Hood, N.S.—The secretary reports as follows:—'As you have asked for a report from this fishing station so early in the season, I have not much to report. The season was about two weeks later than usual. In May we had plenty of herring; we put up some in the freezer and kept them frozen until August. There was very little call for frozen herring, none scarcely, as there was fresh herring in the nets all summer, also mackerel. Hake fishing was not a half catch. Haddock and cod were about an average catch. Dogfish were very plentiful from middle of August up to present time.'

North Bay, Ingonish.—The secretary reports as follows:—'The year just passed has been of exceptional severity. The ice remained in our bay up to June, and floating ice was still seen in Sydney as late as June 10. The summer has been cold, foggy and entirely abnormal, and everything has been correspondingly late. Two circumstances have rendered the operation of the bait freezer even more expensive than usual. First: The ice did not form in the harbour the past winter and spring of a character to render it fit for use in the freezer, it was soft, filled with snow and lacked substance; accordingly, the freezer was filled to its full capacity with fresh water ice, brought from a distance at quite an increase of labour and expense for cutting, hauling and storing. Second: The presence of ice in our bay prevented any substantial catch of herring by our fishermen, so we were obliged to buy from the traps at South Bay, in order to get an adequate supply. The total bait frozen this year is as follows:—herring, 5 tons; mackerel, 10 tons; salmon and halibut, 3 tons; total, 18 tons. All of the mackerel, some of the herring and all of the salmon and halibut came from our own fishermen. Until June, it may be said, there was no fish in or near Ingonish bay, so far as could be determined, as the ice made fishing almost impossible.' About June 1 the haddock struck in, and for a month or over there were great catches, in the aggregate perhaps the largest known here for many years, and of course the bait freezer helped things along. The months of July and August were so exceptionally foggy, cold and inclement that fishing here was almost at a standstill. Everything, too, in the way of farming has been delayed here as elsewhere, and that has had its effect on the fishing. It is expected that the September fishing will soon begin in earnest, and the bait freezer is all ready, with a good supply of bait to carry the fishermen along for the year; up to now there has hardly been a single squid caught in our bay, so of necessity the fishermen have had to depend on the bait freezer. We hope, however, that squid will strike in and enable us to supplement our frozen herring and mackerel with frozen squid. As a business venture the bait freezer is not yet a success, in direct pecuniary returns, it was not expected to be when it was originated, but as a method for helping fishermen it is beyond all price. It is a safeguard to them and to their industry, beyond their appreciation as yet.

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Though ignored often in days of plenty, yet it tells its own story when the hard days come, the days of plenty of fish in the bay and no bait to be had; we have seen this and proved it and it is a part of our history; we are more sure than ever of the wisdom of having a bait freezer here. We may say of our plant that it is in perfect condition and is managed with great care and under personal supervision, and the bait frozen in it goes out to the fishermen as perfect as can be made, so far as we know, and is used by our fishermen with excellent results. We do not hesitate to say that our bait freezer is a real and constant instrument working for good.'

South Bay, Ingonish.—The secretary reports as follows:—'The season was much later this year than usual, not beginning until June 1. The month of June we had very good weather, with fair fishing, fresh bait being used. No dogfish; haddock and cod being the principal fish; July weather fair; cod and haddock fair; frozen bait used mostly. August weather fair the first of the month; cod fair, haddock scarce; frozen bait used principally; last of month bad weather, with fish scarce.'

Alder Point, N.S.—The secretary reports as follows:—'Please find inclosed the Alder point fishing report. We did not do much with our freezer yet, froze but very few fish; this, you know, has been a very hard year, the ice remaining so long on our coast, and the bait all passed.'

Gabarouse, N.S.—The secretary reports as follows:—'The fishing at Gabarouse has at no time been very good this season. The catch of mackerel and herring was good, more so than usual, and good prices were made for mackerel. The cod-fishing was also good, and excellent prices are being paid.

'The lobster season opened late, the latest for many years. Drift ice remained on the coast until June 6 and was broken by a gale of wind, which lasted until June 15, and many dollars' worth of gear and traps were destroyed. No extension of the season was granted, while the fishing at the season's end was the best for many years; the catch was about the same as last year. One hundred barrels of herring were placed in the cold storage and were used for lobster bait. On the whole, the fishermen have done well to date.'

St. Peters, N.S.—The secretary reports as follows:—'Last winter we filled our freezer with ice, in order to be ready for anything that might turn up. We found out by former experience that it was useless to freeze spring herring, as the fishermen here will not use it. We handled a large quantity of mackerel and salmon, and found the freezer very useful. We expect in the fall to stock with squid and prosecute the fall fishing; we are doing our utmost to get the people educated to this fall fishing, as we are situated in one of the best localities for this industry.'

Petit de Grat, N.S.—The secretary reports as follows:—'Haddock has been fair, herring also fair, codfish good, and weather good for fishing. Bait obtainable most of the time. In regard to the Bait Association, we froze 20 tons of squid last fall, which was kept to January 15, 1907, and has given best results and proved a blessing for the fishermen at the time. We have the ice for this year's operations.'

Cheticamp Chapel, N.S.—The secretary reports as follows:—'As to the fisheries, I will say that the record of cod, hake and haddock will fall below that of last year. The supply of clams here lost its quality early in the season, through heat and other causes, and this caused a drawback in the general catch of the season. Much was lost thus on account of not being supplied with good bait; the fishermen, therefore, waited with impatience the arrival of squid on the shore. With regard to squid, I will say that they are playing quite bad up to the present time; however, there is quite an abundance upon the shore. Salmon did remarkably well, considering the shortness of the season. Lobsters fell a little in quality, but the returns have been as favourable as any preceding year; mackerel are quite abundant, but cannot be made to bite. It is

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very probable that good hauls will be made later in the fall, when the water gets colder. I will say here that the few that have been captured are of an exceptional quality.

'In conclusion, will add that the dogfish appeared to be not quite so troublesome as formerly, and very little trouble will, I think, be experienced this season on their account.'

Half Island Cove, N.S.—The secretary reports as follows:—'This season was very late, but they have done well with the fish, bait has been fair, and when they could not secure their own bait from nets and traps, they have taken it out of the cold storage, which has kept the fishermen fairly supplied; and one thing, up to date we have not been bothered with dogfish, they have kept off well so far. The price of fish has been good all round, which is good for the fishermen. One thing I might say here regarding the cold storage buildings, we have not freezing capacity enough, as when bait strikes, it is rather a glut, and by the time you get the first lot frozen they are over, so the cold storage buildings should have more capacity, so they could freeze more bait at a time than they have been doing.'

Larry's River, N.S.—The secretary reports as follows:—'With regard to your request, would say the fishery of this locality exceeds that of last year to date, in spite of the bad weather; cod fair and spawn herring also. Fishermen seem to be proud of the season in the line of fishing to date.'

New Harbour, N.S.—The secretary reports as follows:—'I might say that the fishing in our locality has been very fair this season, that is to say that cod, pollock and haddock have a little more than overbalanced the catches of last year, and an increase in the catch of mackerel of about one-third of that of last year; the catch of herring about the same as that of last year.'

Drum Head, N.S.—The secretary reports as follows:—'I have much pleasure in telling you that the summary of the season's operations has been very good. Fish has not been plentiful, but prices very good, which made up a good average.

'Bait was very easily procured, some frozen bait used, good results from same; dogfish also plentiful, which is a great hindrance, a plague to the fishermen. I have considerable bait in freezer now, and prospects look good for remaining part of the season's operations.'

Port Bickerton, N.S.—The secretary reports as follows:—'We have not had favourable weather. Fish is quite plentiful, bait scarce, dogfish bothersome. We are making preparations to freeze squid for bait.'

Quoddy, N.S.—The secretary reports as follows:—'I regret to say the Quoddy Fishermen's Bait Association has not been operated this year, and will have nothing to report but a failure of the codfishing business on account of dogfish, but we expect it to come up again as soon as the fishermen can get boats, nets and other appliances for taking cod. The lobster fishing in this section was a failure, and they are going to take up fishing again.'

Ketch Harbour, N.S.—The secretary reports as follows:—'Our freezer has not been operated until just now; we are putting in some squid, but they are not very plentiful yet; we expect to have in a good share as soon as possible. We have a lot of ice in all ready to fill it if we can get the squid, so I cannot say much at present or give a satisfactory report until later in the season; fishing is fairly good yet; pollock principally.'

Lockeport, N.S.—The secretary reports as follows:—'The fishing was a good deal better than last summer; there has been a lot more fish landed here this summer than last.

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La Have, N.S.—The secretary reports as follows:—‘There were only small catches made in the months of May and June, so far as cod, haddock and hake were concerned, due to the fact that the weather was rough and unfavourable for fishing, but since that time there has been large catches of the above, in fact a greater quantity than was caught during the same period last year. Bait was easily procured, there being numbers of small herring as well as squid on the coast.

‘Dogfish, although numerous in certain sections of the coast, do not seem to have retarded the catch.’

Sandy Cove, N.S.—The secretary reports as follows:—‘In accordance with the regulations governing Fishermen’s Bait Freezing Associations, I beg to submit the following report for 1907. We stored about 150 tons of ice this year, and froze in April about five tons of gaspereaux, in May froze about four tons of same, which went out just as soon as we could count them out; herring were very scarce in April and May, in June we froze six tons of herring which we happened to get in the weirs, which sold evry rapidly; in August we handled 10 barrels of squid, which sold at once; we handled a great quantity of fresh haddock at different times.’

L. E. Pubnico, N.S.—The secretary reports as follows:—‘The only bait our shore fishermen use or depend on are cockles which come from St. Andrews, N. B., and vicinity; we could not get enough of them at the proper time to supply them; a great many of them are dead when we get them; as it takes about three days to get them here, and at a great expense to the fishermen, about 30 cents per bucket, the only way to secure a supply is by steamer that will bring them direct here, so that water may be thrown on them to keep them alive. If the government would help a little by subsidy, say four or five hundred dollars, it would allow a person to hire men to go into it, and keep a steady supply on hand during the fishing season, from the first of June to the first of September or later, which would give bait to a lot of men in Shelburne and Yarmouth counties. The one obstacle apparently in the way this year was that the amount asked for was so small, \$300, that they would not consider it. I would gladly make it more, but do not like to ask too much, and it would be the means of keeping so many fishermen, who contribute so largely to the revenue. Our vessels have done considerably better this year than last year; fish were fairly plentiful, only they were bothered for bait, and cockles are the only known bait the troublesome dogfish will not take. We had a small run of herring in the month of July, but only for two weeks and none since. Had our vessels not been bothered for bait they would have done a great deal better. I filled the freezer with ice last winter by your suggestions, but have not used a pound of it yet, and no likelihood of it; it cost me about \$150 net. The fishermen want me to go into it, but the expense would be \$1,500, whether I got a cockle or not, and I should sell 4,000 buckets before I could see my way clear at \$1 a bucket, as the price varies from 50 to 75 cents per bucket there.’

Lunenburg, N.S.—The secretary reports as follows:—‘Our ice-house in connection with the freezer was filled as usual with ice, and we have during the fishing season supplied a number of small boats and vessels with same, as required. Also had a quantity of frozen squid, which we supplied to vessels and boats during the spring months.

‘We now have a quantity of herring, which we were selling for bait to boat fishermen as required, and we will, later on in the season, likely fill the same with frozen herring from Newfoundland.’

Digby, N.S.—The secretary reports as follows:—‘The bait freezer has been working all right, and the fishermen use a lot of bait out of the freezer. I hope this fall to fill it full, if any large herring come; as yet herring have been on the small side. Please let me know the best kind of ice-plow to get for cutting ice out of pond, and of

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ice-tools for freezer use; I have to pay duty to get them from the United States. I want an outfit for cutting ice, and an ice chipper. Herring has been fairly plentiful this month.'

New Brunswick.

Shippigan, N.B.—The secretary reports as follows:—'The freezer has been operated; we have frozen about about 15 tons of herring; all this was frozen in the spring. No fish or herring taken now; what fish we freeze is frozen in the spring. We have had rough weather for fishing, not more than 3 tons were sold; the fish seem to be very good, well frozen and good for bait.'

Shediac, N.B.—The secretary reports as follows:—'In reference to our freezer, I beg to say the fishermen thought this spring it paid them better to sell their catch of herring to the different packers employed in the business here; we, therefore, got none for the freezer, and in connection with it I may say, had we got many herring, we would have lost them, for, from some reason which we cannot tell, 150 tons of the 200 tons of ice we put in the ice-house portion of the building melted away, although we put same in as carefully as other years. At the present time we have about two tons of fresh frozen codfish in the freezer, which are being sold out gradually. Had we not lost the larger quantity of ice, we could have filled both cold storage rooms with cod. We think next year we shall use sawdust in packing ice, instead of meadow-grass as we have done the past three seasons; each year we lose a quantity of ice.'

Quebec.

Bonaventure River, Que.—The secretary reports as follows:—'I have the honour to send you, as requested, the report on cold storage. We expect to freeze small herring in the fall as usual. The report of last month is as follows:—We had good weather the most of the time, and good cod-fishing; fresh bait scarce, but the frozen bait used with success; we are not bothered with dogfish.'

Bonaventure East, Que.—The secretary reports as follows:—'Report fishing very poor, bait very scarce, fresh bait none, weather very rough. In the month of May we had 5,500 pounds of herring frozen, and in June 700 pounds; the fishermen claimed to save their labour all right. July, we had no herring, and none in August; hoping to have some few hundred pounds to freeze in September. We put in salt-water ice, and we do not find it to keep as well as the fresh-water ice.'

Paspebiac, Que.—The secretary reports as follows:—'Ice in the spring delayed the opening of the fishing season about three weeks later than usual, but catch of cod to date exceeds last year at corresponding date. The continued wet weather has affected quality of fish to some extent, but not so much as some people might expect, accounted for by lack of any heat. I do not believe that in this immediate locality as many men are engaged in the fishing as last year, due to other fields of labour demanding help; bait has been obtainable throughout the season; dogfish have not been reported; cod is still in very fair quantity on the ground; mackerel have not been seen, in fact not looked for during past few years. We are just preparing for the fall fishing, and, considering the high prices ruling for fish, is likely to prove remunerative.'

Maria Capes, Que.—The secretary reports as follows:—'Freezer was filled with ice in February. In April we froze and stored about 8,000 pounds. In May we filled one dead room and part of the other—18,000 pounds. In June herring, codfish and salmon we froze 11,000 pounds. In July we froze mostly salmon, 5,000 pounds. In August, fall herring, codfish, &c., 1,000 pounds.

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'We have sufficient ice to carry us through the season; the freezer works well and gives every satisfaction, but would be superior were the store-rooms larger, and special cold storage attached where meats and fish could be chilled, and taken in and out easily, instead of having to open the dead rooms so often, causing outside air to penetrate. Fishing throughout has been fair and much better than last year in many sections, and is still improving at time of writing. Fall herring are plentiful, and we freeze some every day for bait.'

St. Godfroy, Que.—The secretary reports as follows:—'We put in our freezer this year 100 tons of ice, and we froze twenty tons of herring, all used. We have a lot of ice yet and expect to freeze again this fall.'

Anse à la Barbe, Que.—The secretary reports as follows:—'The freezer was partly filled with ice and partly with snow during March. There were only about 7 tons of herring frozen in May; of these only half has been used, but later on we expect to freeze more herring and squid. The reason no more frozen bait was used was because there was plenty bait all spring and summer; what frozen bait was used gave good satisfaction.'

Newport Point, Que.—The secretary reports as follows:—'Summary of fishing operations from Pointe Macquereau to Percé: Lobster catch small and behind last year, chiefly caused by storms damaging gear. Bait: Herring struck in somewhat later than usual, but heavier, and have kept the grounds up to this, also of larger size than has been for years past. Freezer: Bait Association, Pabos West, still filled with frozen herring, not needed, as fresh was obtainable daily. Salmon catch only about half of last year. Caplin struck somewhat later, but did not hold the grounds.'

'Codfish struck on June 6, about fifteen days later than usual; has been very plentiful, both inshore and on Miscou Banks, but weather unfavourable for fishing; the catch is about 20 per cent better than last year to date. Weather has also been very unfavourable for curing, and much of the catch damaged. Local prices rule high, in fact too high for the markets. Some merchants have sustained heavy losses in the July gales; in places without shelter, every boat was a complete wreck, together with nets and trawls; each boat valued at no less than \$200, including fishing gear. At Little river west, out of a fleet of 10 boats, only one escaped total wrecking. Weather continues very unsettled and unfavourable for fishing, and in consequence, young men are leaving in droves for the lumbering districts.'

Carleton Centre, Que.—The secretary reports as follows:—'In reply to your letter of August 27, asking me for a report of the season: The catch of salmon this summer was better than last year; the catch of lobsters was better also; the catch of codfish was very large; the bait was principally used from the freezer and was found very good for fishing. We have still a large quantity of fat herring on hand to furnish the fishermen with all the bait they may require.'

Etang du Nord, M.I.—The secretary reports as follows:—'When the herring struck in, in the spring, we had the cold storage chambers filled with herring; at the end of June it was all used for codfish bait by our fishermen here, except about 200 crates. The fishermen took a lot of fish with this bait, some boats as many as three quintals with one crate of herring.'

Cabin Cove, M.I.—The secretary reports as follows:—'We froze 800 crates of herring in the month of May, and the fishermen have been using them since and find them very good, and gave them good satisfaction all summer. A good many of them have used their share a long time ago and are buying from others. It will be all used before the fall.'

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Point Basse, M.I.—The secretary reports as follows:—‘The herring fishing commenced on May 7, later than usual, but has lasted longer than ever and has been plentiful. There have been about 15,000 barrels caught in this locality, at Point Basse, for lobster bait, mackerel bait, smoke-house, and to supply American, St. Peter and Nova Scotian vessels for bait. Lobster-fishing commenced on May 12 and has not been quite as good as last year.

‘Spring mackerel-fishing commenced on June 21 and has been a good deal better than last year, but came twenty-four days later than last year; the quantity caught here was about seven hundred barrels. Codfish was about five hundred quintals, nearly three quintals more than last year. Fall mackerel-fishing commenced only about a fortnight ago, but has not been much yet. About the bait in the freezer we cannot say much yet, because fresh bait has been so late that there has not been much used, but what was used in July has been found very good; I hope the remainder will be used for codfish in November. The fishermen find same very good bait for mackerel. Hoping this will be satisfactory.’

South Beach, M.I.—The secretary reports as follows:—‘On account of the ice being so long on the coast, the herring only came in about May 15, but they were plentiful and remained until July 15. Lobster-fishing began nearly a month later than usual; the catch was rather small on account of stormy weather. During the month of June codfish and spring mackerel were very plentiful, and the fishermen did very well with them. During the last part of the month of August there was no fish of any kind to catch, and it was only on the 27th that the fall mackerel appeared in small quantities. The bait in our freezer was found very good for codfish, but there was not much used, on account of fresh herring being so plentiful along the shore. Fishermen have tried it for mackerel and claim it is the best bait ever used; they expect to use it all up for mackerel and fall cod-fishing with good results. The freezer is perfectly kept and in very good condition.’

These are all the reports I have from the small freezers, and, as a summary of the season's operations, would say that generally ice bothered the fishermen all around the shores, and in some sections destroyed a great deal of gear, such as traps, nets and seines. The season has been an average one to date, since the commencement. Bait around the Gaspé coast and the Magdalen islands has been very plentiful so far, and in other sections there has not been a great scarcity. Quite a contrast from last year, when bait was hard to get anywhere. The Cold Storage Company, at Halifax, are now erecting a new, large ammonia plant at Hawkesbury, C.B., to be able to freeze squid, which are caught in that locality in very large quantities usually. A good supply of squid and Bay of Island herring was frozen at Halifax and Canso last year. The supply was more than the demand, this will at times happen; when the new freezer is completed, the supply of bait should be equal to all emergencies.

I received the following report from the Canso Cold Storage Company:—

‘The fishing season here opened unusually late, drift ice being on sight on June 3, a very unusual occurrence. Since that date fishing operations have been conducted about as usual and with rather more than usual success. The weather has been moderate and enabled the boats to carry on their work without any obstructions from gales of wind, but the need for power to enable them to get upon the ground has been emphasized during the moderate weather that prevailed; steps are being taken to supply that need. The demand for frozen bait in the spring up to May 5 was good, and we sold some 3,000 barrels of last year's stock up to that date. Since that date there has been little demand for frozen bait, as the wants of the fishermen have been pretty well supplied by fresh herring and mackerel. The catch of line fish up to this date has been up to the average, and so has the lobster catch; the mackerel catch was disappointing. Dogfish have not materially interfered with the operations of our fishermen

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up to this date. There has been no bait laid in yet for next season's supply. Squid up to this time have been almost a total failure; we hear of them north and west of us and some on the banks, but they have not visited this locality.'

The whole most respectfully submitted.

I have the honour to be, sir,

Your obedient servant,

PETER MACFARLANE.

September 13, 1907.

Hon. L. P. BRODEUR,
Minister of Marine and Fisheries,
Ottawa.

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APPENDIX No. 13.

REPORT OF THE FISHERIES PROTECTION SERVICE OF CANADA.

(By Commander O. G. V. Spain.)

OTTAWA, October 30, 1907.

To the Honourable
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to report on the work of the Protection Service on the Atlantic and Pacific seaboard as well as the Great lakes of Ontario. The cruisers forming the protection fleet of last year, (1906), were as follows:—

Canada, Capt. Knowlton.
Vigilant, Capt. Dunn.
Osprey, Capt. Graham.
Constance, Capt. May.
Princess, Commander Wakeham.
Petrel, Capt. Kent.
Kestrel, Capt. Newcombe.
Curlew, Capt. Robinson, acting.

The steamers *Canada*, *Petrel* and *Curlew*, as well as the schooner *Osprey*, cruised and protected the Atlantic seaboard from the Bay of Fundy to the Northumberland strait.

The steamer *Princess*, which replaced *La Canadienne*, is exclusively for the protection of the Gulf of St. Lawrence fisheries, including Magdalen isles.

The steamer *Constance*, although run by this department, is exclusively used by the Customs Department.

The steamer *Vigilant* cruised the inland waters of Lake Erie with headquarters at Port Stanley.

The steamer *Kestrel* is on the British Columbia coast with headquarters at Vancouver.

Two small patrol boats, the *Falcon* and the *Georgia*, assist the *Kestrel* in fisheries protection work in British Columbia.

There are also a couple of such launches, patrol boats, assisting in the protection fisheries on the Atlantic side, replacing the cruisers in places where the larger vessels could not very well go. These were manned by some of the crews of other cruisers.

I have the honour to be, sir,

Your obedient servant.

O. G. V. SPAIN,
Commanding Marine Service of Canada.

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LIST of United States Fishing Vessels to which Licenses were issued under the Act intituled 'An Act respecting Fishing Vessels of the United States of America,' during the year 1906.

Name of Vessel.	Port of Registry.	Tons.	Port of Issue.	Fees.
				\$ cts.
Jas. R. Clark	Salem, Mass.	43	Yarmouth, N.S.	64 50
Margaret	Gloucester, Mass.	79	Canso, N.S.	118 50
Theodore Roosevelt	"	90	"	135 00
Effie M. Morrissey	"	83	Digby, N.S.	124 50
Oregon	"	79	North Sydney	118 50
Georgie Campbell	"	78	"	117 00
A. E. Whyland	"	96	Pubnico, N.S.	144 00
Elector	"	84	"	126 00
Valkyrit	"	104	Yarmouth, N.S.	156 00
Gladys & Sabra	Salem, Mass.	50	Liverpool, N.S.	75 00
Grace Darling	"	43	"	64 50
Golden Rod	Gloucester, Mass.	98	Halifax, N.S.	147 00
Richard Wainwright	"	98	Liverpool, N.S.	147 00
Arkona	"	97	"	145 50
Flirt	"	82	Shelburne, N.S.	123 00
Mildred Robinson	Boston, Mass.	86	Louisbourg, N.S.	129 00
Senator Gardner	Gloucester, Mass.	94	Yarmouth, N.S.	141 00
Maggie & May	"	81	"	132 00
J. J. Flaherty	"	124	Tusket Wedge	186 00
H. F. Whitten	"	92	Pubnico, N.S.	138 00
Arabia	"	86	"	129 00
Madonna	"	79	"	118 50
American	"	99	Tusket, N.S.	148 50
Alice R. Lawson	"	85	"	127 50
Bohemia	"	86	"	129 00
Athlete	"	96	"	144 00
Essex	"	84	"	126 00
Hattie A. Heckman	"	72	"	108 00
Blanche	"	78	"	117 00
Gladiator	"	75	"	112 50
Horace B. Parker	"	62	"	93 00
Henry M. Stanley	"	83	"	124 50
Sceptre	"	91	"	136 50
Hazel R. Hines	"	79	"	118 50
Wm E. Morrissey	"	93	"	139 50
John L. Nicholson	"	92	"	138 00
Mathew Kearny	"	47	Shelburne, N.S.	70 50
Independence II	"	110	Halifax, N.S.	165 00
Mabel D. Hines	"	92	Tusket, N.S.	138 00
Parthia	"	77	"	115 50
Maggie Turner	Boothbay, Me.	44	Yarmouth, N.S.	66 00
Senator Saulsbury	Gloucester, Mass.	77	Liverpool, N.S.	115 50
Senator	"	75	Halifax, N.S.	112 50
Ella M. Goodwin	"	86	"	129 00
Aloha	"	100	Canso, N.S.	150 00
Preceptor	"	89	"	133 50
Paragon	"	81	"	121 50
Arthur Binney	Boston, Mass.	80	"	120 00
Mystery	"	78	"	117 00
Susan & Mary	"	83	"	124 50
Lizzie Maud	Vinalheaven, Me.	48	Yarmouth, N.S.	72 00
Quickstep	Boston, Mass.	75	Digby, N.S.	112 50
Gossip	Gloucester, Mass.	91	Yarmouth, N.S.	136 50
S. P. Willard	"	87	Liverpool, N.S.	130 50
Samuel R. Crane	Salem, Mass.	52	Thornes Cove	78 00
Cosmos	Southwest Harbour	25	Yarmouth, N.S.	37 50
Colonial	Gloucester, Mass.	79	Louisbourg, N.S.	118 50
Waldo L. Stream	"	81	Canso, N.S.	121 50
Tattler	"	135	Lockeport, N.S.	202 50
George Parker	"	100	Arichat, N.S.	150 00
Hiram Lowell	"	95	Pubnico, N.S.	142 50
Lucinda I. Lowell	"	77	Lockeport, N.S.	115 50
Dictator	"	92	Liverpool, N.S.	138 00
Maryland	"	86	Canso, N.S.	129 00

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LIST of United States Fishing Vessels to which Licenses were issued—*Concluded.*

Name of Vessel.	Port of Registry.	Tons.	Port of Issue.	Fees.
				\$ cts.
Winifred.....	Boston, Mass.	60	Port Hawkesbury.	90 00
Raymah.....	"	95	Yarmouth, N.S.	142 50
Titania.....	Gloucester, Mass....	77	Shelburne, N.S.	115 50
Onato.....	Boston, Mass.	105	Port Hawkesbury....	157 50
Massachusetts.....	Duxbury, Mass.	102	Port Mulgrave.....	153 00
Agnes.....	Gloucester, Mass....	75	Canso, N.S.	112 50
Thomas S. Gerton.....	"	92	"	138 00
Illinois.....	"	78	Port Hawkesbury....	117 00
Elizabeth N.	Bucksport, Me.	102	Pubnico.....	153 00
Matchlin.....	Plymouth, Mass....	73	Lockeport, N.S.	109 50
Jennie B. Hodgdon.....	Gloucester, Mass....	85	Arichat, N.S.	127 50
Squanto.....	"	95	House Harbour, M.I....	*142 93
Juno.....	Boston, Mass.	85	"	*127 94
Marie Elliot.....	Gloucester, Mass....	75	Amherst, M.I.	*113 38
Judique.....	"	89	"	*134 38
Admiral Dewey.....	"	78	"	*117 88
Juniata.....	Boston, Mass.	49	Port Hawkesbury....	73 50
Joseph W. Lufkin.....	Gloucester, Mass....	80	North Sydney.....	120 00
Cavalier.....	"	96	Port Mulgrave.....	144 00
Gardner W. Tarr.....	"	62	House Harbour.....	93 00
Olga.....	"	77	Canso, N.S.	115 50
Corona.....	"	82	Pubnico, N.S.	123 00
Vigilant.....	"	57	Canso, N.S.	85 50
Francis J. O'Hara.....	Boston, Mass.	83	Arichat, N.S.	124 50
Teazer.....	Gloucester, Mass....	61	House Harbour, M.I....	91 50
Nellie Dixon.....	Boston, Mass.	68	Liverpool, N.S.	102 00
Elmer E. Gray.....	"	84	House Harbour, M.I....	+126 50
James W. Parker.....	"	96	"	+144 50
T. M. Nicholson.....	Bucksport, Me.	90	Shelburne, N.S.	135 00
Meteor.....	Gloucester, Mass....	96	House Harbour, M.I....	+144 15
Tacoma.....	"	71	Arichat, N.S.	106 50
Sarah C. Wharf.....	Boston, Mass.	26	North Sydney.....	39 00
Elva L. Sparling.....	South West Harbour	50	Yarmouth, N.S.	75 00
Marguerite.....	Eastport, Me.	12	North Head, N.S.	18 00
Rena A. Percy.....	Cranberry Island....	46	Yarmouth, N.S.	69 00
F. W. Homans.....	Gloucester, Mass....	43	Port Hawkesbury....	64 50
Rising Billow.....	Eastport, Me.	14	North Head.....	21 00
Viola.....	Beverly, Me.	14	Yarmouth, N.S.	21 00
Arbutus.....	Gloucester, Mass....	87	Canso, N.S.	130 50
Ralph F. Hodgdon.....	Eastport, Me.	60	"	90 00
A. M. Nicholson.....	Gloucester, Mass....	100	North Sydney.....	150 00
Corsair.....	"	78	"	117 00
Wm. H. Rider.....	"	46	Canso, N.S.	69 00
		8,364		\$ 12,550 00

* Overpaid \$3.51. † Overpaid \$1.00. ‡ Overpaid 15 cents.

107 Vessels. Tonnage 8,364. Overpaid \$4.66.
\$12,546.00 Fees collected.

FISHERIES PROTECTION SERVICE.

List of United States Fishing Vessels which have entered Canadian Ports for the Year ending 31st October, 1906, showing Net Tonnage, Crew and the number of times each Vessel entered the several Ports.

Number.	Name of Vessel.	Net Tonnage.	Number of Men.	Arichat.	Barrington.	Canso.	Georgetown, P.E.I.	Halifax.	Liscomb.	Liverpool.	Lockeport.	Louisburg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Mulgrave.	Shelburne.	Souris, P.E.I.	Whitehead.	Yarmouth.	Total Entries.
1	A. E. Whyland.....	96	18	1		2		1				1		3	2					2	13
2	A. L. Spinney.....	72	18									3		1						1	7
3	A. M. Nicholson.....	100	18	1						1											6
4	Admiral Dewey.....	78	18	1		2				2	1				1						7
5	Agnes.....	75	18	1		2				2							1				1
6	Agnes V. Gleason.....	44	10														1				1
7	Aleina.....	51	18														1				1
8	Alice M. Guthrie.....	57	16											2						1	6
9	Alice R. Lawson.....	85	20			1		1				1									1
10	Aloha.....	100	22			1								1							5
11	American.....	99	20			2		1				1		1					1		6
12	Annie Greenlaw.....	69	18			1		1		1		1		1							10
13	Annie M. Parker.....	100	23			1		1	2	1		1		1						2	6
14	Arabia.....	86	15			1						1		1							5
15	Arbutus.....	87	18			1				1		1		1						1	6
16	Arcadia.....	90	20						1			1		1					1		6
17	Argo.....	79	19			1				1	1	1		4	1						16
18	Arkona.....	97	22			2		1	1	6		1		1							5
19	Arthur Binney.....	80	19	1		1				3											1
20	Arthur D. Story.....	75	13									1					1				5
21	Arthur James.....	97	18			2		2													11
22	Athlete.....	96	18			2		1		2				3	1					2	4
23	Atlanta.....	74	16											3							11
24	Avalon.....	85	18			2		1						1					1		5
25	Belle Franklin.....	52	16											1							1
26	Bertha & Pearl.....	77	17											1							1
27	Blanche.....	78	72			3								1	2					2	10
28	Blue Jacket.....	86	18											1							1
29	Bohemia.....	86	20											4	1					1	11
30	Braganza.....	67	19		2			1						1							2
31	Carrie M. Babson.....	91	17											2							2
32	Catherine Burke.....	92	23														3			1	4

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[illegible]

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List of United States Fishing Vessels which have been entered Canadian Ports for the year ending October 31, 1906—*Concluded.*

Number.	Name of Vessel.	Net Tonnage.	Number of Men.	Arichat.	Barrington.	Canso.	Georgetown, P. E. I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisburg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P. E. I.	Whitehead.	Yarmouth.	Total Entries.
254	William Matheson	72	16	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
255	Winnifred	60	19	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
256	Yakina	76	20	20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
257	Yvonaponsett	71	20	20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Totals	19,961	4,720	42	20	207	75	34	113	23	100	9	170	52	14	8	40	192	1,260	1,260	1,260	1,260

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H.M. DOCKYARD, HALIFAX, N.S., December 31, 1906.

TO CAPTAIN O. G. V. SPAIN, R.N.,
Commanding Marine Service of Canada,
Ottawa.

SIR,—I have the honour to submit to you my annual report of the work performed by the C.G.S. *Canada*, during the season of 1906, just closed.

During January and February the *Canada* lay at the wharf then occupied by the Department of Marine and Fisheries at Halifax, making necessary repairs and fittings to deck and engine department. About the 15th January, after repairs had been completed, I reported ship ready for sea at short notice.

On the 5th January I received a message from you informing me of the death of the Hon. Raymond Prefontaine, Minister of Marine and Fisheries, at Paris, France, and later that the remains would be brought to Halifax on H.M.S. *Dominion*, about the 22nd January, and instructing me to have twenty men and two officers of the cruiser *Canada's* crew, ready to receive the body and accompany it to Montreal (which we were much gratified to learn by a letter from Col. Gourdeau, Deputy Minister, had been carried out to the satisfaction of himself and the department). Captain Kent, of the cruiser *Petrel*, joined us at Halifax, and Captain May, of the cruiser *Constance*, at Levis, P.Q., both accompanying us to Montreal. At Montreal the blue jackets of this ship had the honour of maintaining a constant guard over the body of the late minister, while it was lying in state at the city hall, and on the 25th January, attended the funeral, placing the body in the family vault, at the cemetery. We afterwards returned to the ship at Halifax, where, with about forty-five of a crew, ships duties were resumed, the time being taken up in drilling the men and keeping the ship in order.

On the 11th March, an order was received from the department for either the C.G.S. *Lady Laurier* or *Canada* to proceed at once in search of a man missing from the crew of the SS. *Baines Hawkins*, which foundered off Cape Morien on Saturday, 10th March. Four hours after the order was received, this ship was going to sea at full speed. Off Scattarie, 10 p.m., March 12, made diligent search for the missing man, but nothing of him could be seen—weather very cold; 6 a.m., March 13, came to anchor in Louisburg harbour, very cold; ship considerably iced up. On the 14th we proceeded through considerable field and drift ice, towards Flint island, hoping the missing man might have reached there, but on reaching the island we found nothing of him. We then proceeded westward, going through large quantities of field and drift ice as far west as Point Michaud. Midnight, came to anchor in Liscomb harbour for shelter; southeast snow storm. March 16, heavy gale. March 17, weather clearing; wind off shore; proceeded westward and arrived at Halifax same day, making ship fast at old berth, Marine and Fisheries wharf. On our return to Halifax we found several United States bankers in port, all having Canadian license and having bait sent to them by rail from the freezer at Strait of Canso. I am of opinion United States bankers would fare poorly only for Canadian bait.

About the middle of April we started on our regular cruising, having had orders from you some time during the winter to have Cape North in mind and be on hand as soon as the ice cleared. From Halifax we cruised westward to Lunenburg and Shelburne, thence eastward, calling at several ports along the south shore of Nova Scotia, passing through the Strait of Canso on the 28th April, and arrived at the Magdalen islands on the 2nd May, where we found several Canadian and United States fishing vessels taking bait, herring being plentiful. We afterwards cruised towards Cape North, C.B., but seeing ice on our port beam and weather threatening, turned ship's head to the westward, turning the engines about sixty revolutions for the night; weather thick and rainy. Daylight broke with fine weather, turned ship's head towards Cape Breton coast and cruised on this coast for some days in company with a large fleet of fishing vessels. On May 8 we fell in with the United States trawler *Raymah*,

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of Boston, well within the three mile line, trawling under canvas, having several dories alongside loaded with fish. After ascertaining beyond a doubt that this vessel was trawling in Canadian waters, I took her in tow to North Sydney, reporting the seizure to you at Ottawa by wireless message. I remained (with the *Canada*) in charge of this vessel until May 26, when, by your instructions I left the ship in charge of First Officer, Mr. Milne, and proceeded by rail to New Orleans, U.S., to bring the dredge *Galveston* to Quebec. I arrived at Quebec with the *Galveston* on June 29, and handed her over to Engineer M. Cowie. I then returned to the *Canada* at North Sydney.

The *Canada* had been cruising mostly about the Cape Breton coast with an occasional run to the Magdalen islands until August 31, when we went to dock at Pictou, N.S., cleaning and painting bottom and overhauling engines, &c. Floated ship again on September 6, and after coaling and taking water supply, I proceeded on Sunday, September 9 by your order, to Port Hawkesbury, where on the 10th we took Col. Anderson, chief engineer of the department on board, and immediately proceeded to St. Paul's island, arriving there on the morning of September 11. On September 12 we arrived at Port au Basque, Newfoundland, remaining there until the 13th. After visiting Cape Ray lighthouse and the Marconi station at that place, we next landed Col. Anderson at Cape North, C.B., where he located a new fog alarm, and put Money Point light right. We then proceeded to North Sydney, arriving there the same evening, where Col. Anderson left the ship. We afterwards proceeded to cruise off the south shore of Nova Scotia, making our headquarters for mails, &c., at Isaac's harbour—searching the coast from Arichat to Halifax for illegal lobster fishing, but found practically nothing doing. On October 26, by your instructions, we took up our station west of Halifax, making Lunenburg our headquarters for mails, telegrams, &c., and cruised from Cape Negro to Halifax until by your instructions we moored the ship on November 29 at pier No. 1, H. M. dockyard, Halifax, and awaited your further instructions, keeping a full crew by the ship, carrying on the different drills and other duties, when on December 31, Lt.-Col. Gourdeau, Col. Anderson, chief engineer of the Marine Department, and yourself arrived here to take over the dockyard.

I may state that the season has been uneventful, with the exception of the seizure of the United States trawlers *Ramyah* and *Porthia*. The mackerel fishing, with the United States seiners, has been a failure on this coast this season—yet, our net and drag seine fishermen have done exceedingly well.

I have the honour to be, sir,

Your obedient servant,

C. T. KNOWLTON,

Commanding Cruiser 'Canada.'

To Commander O. G. V. SPAIN, R.N.,

Commanding Canadian Marine Service,
Ottawa.

SIR,—I have the honour to submit to you my annual report of work performed by the Canadian cruiser *Petrel* and *Patrol Boat No. 1*, under my command, for season just closed.

The *Petrel* was wintered at Liverpool, N.S., and commissioned May 1. Cruising between Sambro and Cape Sable, meeting the United States seining fleet off Liverpool on May 19.

We remained on this station till May 27, when we proceeded east calling at Halifax on June 5, picking up the seining fleet again off Isaac's harbour.

We remained cruising off the latter place and White head and as far east as Canso till June 13, when by your order we followed the seiners westward as far as Shelburne to report there.

The seining fleet made poor catches, nearly all the hauls were made off Tor bay and White head.

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The fish were trimming the shores very close from Liscomb to Canso, for two days off Green island whilst cruising on the three mile limit, I could see large shoals of mackerel inside while outside of us sixty sail of seiners standing by ready to take anything that might come their way.

Two hundred and fifteen barrels was the highest catch of any vessel on the Cape shore, as far as I could ascertain.

We arrived at Shelburne on June 20, and reported that the United states seining fleet had left the coast.

Orders were received from yourself at Shelburne to proceed east and take up station off Prince Edward Island, with headquarters at Souris.

June 25, we proceeded east, arriving at Canso on the evening of the 26th; next morning proceeded through the Straits of Canso and on to Pictou, arriving there same afternoon.

At Pictou we fitted out patrol boat No. 1 for the lobster service, also a tender to the *Petrel*. This work being finished, we sailed for Prince Edward Island on July 2, arriving at Souris same day, taking up station there.

We cruised in the Gulf of St. Lawrence till October 26. During this time we patrolled the shores of the island and Northumberland straits, with several trips to Cape Breton and Nova Scotia, to Liverpool and Shelburne.

The bank fishing for cod in the gulf this year was not successful, while the hake fishing was carried on with great success off Souris; as many as thirty sail of small vessels could be seen daily tending their trawls.

The fares of fish being sold fresh at Souris to the Atlantic Fish Company, also to the government fish dryer, at prices ranging from eighty cents to one dollar and twenty cents per hundred pounds.

Mackerel did not show up in any great quantity this year, although some large schools were seen on north side of Prince Edward Island; late in the fall, a few barrels were taken off at East point by the local fishermen, which were of enormous size.

There were five American seiners visited the gulf this season, about August 1. One of these remained till first week in October. During her stay she managed to pick up about one hundred and seventy barrels of fish. I am informed her fare was sold at Gloucester for four thousand dollars lump sum, the other vessels returning home early with very small catches.

I am of the opinion that Northumberland straits is an immense hatchery for mackerel and many other kinds of fish, as I have seen large shoals of mackerel coming out of the east end of the straits in August for several years back. Last year I sailed through twelve miles of mackerel between Cape Bear and Cape George making their way east of the straits. Previous to this there had not been a mackerel seen for months in the gulf.

If the department would give me permission to purchase four mackerel nets and have them properly rigged up and go with the *Petrel* next season and drift in Northumberland straits in places where I believe the mackerel resort, it might be the means of solving the mystery where these valuable fish go after coming down the cape shore in the spring; they disappear at Cape Canso or Scatarie, and they can get no trace of them after that.

The lobster fishing at Prince Edward Island was very good this season. An unusual run of large lobsters, were taken on north side of the island between East point and St. Peter's.

Very little illegal lobster fishing was reported on my patrol. I kept patrol boat No. 1 continually cruising on south side at Cape Bear and Murray harbour. Some trawls were seized by me and confiscated. With this boat cruising over the grounds nearly every day, made it about impossible for them to get any gear out.

I kept her out as late as possible this year, leaving there November 19 for Pictou to be hauled out for the winter. It was reported they started in fishing after the boat

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left last year, but I am quite sure that will not be the case this time, as the harbours froze over shortly after she left the island.

After leaving the Gulf of St. Lawrence on October 26, we cruised on south shore of Nova Scotia till November 5, when by your order we proceeded to North Sydney, arriving there on the 10th. The weather after November came in became very boisterous, and the American seiners did not visit Sydney for the fall catch as usual.

On November 13 orders were received to return west to Liverpool, and lay the ship up for the winter. We proceeded to sea at once, calling at Whitehead, Pope's harbour and Halifax, and on to Liverpool, arriving on the evening of the 19th. On the 20th, ship was placed in winter quarters, and paid out of commission on 24th.

My crew was very satisfactory this year. They came from counties of Shelburne, Queen's and Pictou; also from Prince Edward Island. They were all young men, and made every effort to give satisfaction.

The *Petrel* has completed her second year on the Atlantic coast, and has made better time this year than ever before. The speed could be considerably improved on by giving her a bronze propellor.

I have the honour to be, sir,

Your obedient servant,

W. H. KENT,

Commanding Canadian Cruiser 'Petrel.'

LIVERPOOL, N.S., December 17, 1906.

Commander O. G. V. SPAIN, R.N.,
Commanding Fisheries Protection Service of Canada,
Ottawa.

SIR,—I have the honour to submit to you the annual report of the work performed by the cruiser *Osprey* under my command during the season of 1906.

Having received instructions from you during the winter to commission the *Osprey* about the usual time, I proceeded to Shelburne in due time, arriving at that place April 24 and found men busy at work putting the necessary repairs on the vessel. I superintended the work of fitting out, cleaning and painting ship, &c., until May 1 when I called the crew together, had them sign the ship's book and commissioned ship. May 7, finished bending sails and taking stores on board; unmoored ship and anchored in the stream, then remained in the vicinity of Shelburne looking after the lobster fishermen until the 16th when the first of the United States seiners made its appearance.

May 20, proceeded to sea in company with seining fleet, cruising to the eastward. 26th, cruising off Sambro inshore of the seining fleet, consisting of seventy sails.

Continued in company with the seiners, cruising as far east as St. Esprit until June 1 when the last of the seiners proceeded for home.

I may say here that the catch of mackerel this spring was very small, in fact quite a number of the United States vessels went home empty. Our time was then taken up visiting the lobster factories and fish traps, and attending to the various duties in connection with the fisheries until June 24 when we carried away the turnbuckles of the main rigging and had to proceed to Canso for repairs, where we were detained until the 30th, when we again proceeded on our duties.

July 8, acting under your instructions, proceeded to Hawkesbury and had ship hauled on marine slip, cleaned and painted. While there had Mr. Grant measure crew for uniforms.

16th, finished work on marine slip, floated ship and proceeded on our station, cruising between St. Esprit and Liscombe.

During the remainder of the season our time was principally taken up looking after illegal lobster fishing and United States bankers.

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November 26, received instructions from you to proceed to Shelburne and pay off and put ship in winter quarters.

We were detained several days in Shelburne getting the ship stripped owing to wet stormy weather.

With regard to season's catch of fish I am sorry to say that all branches were poor owing principally in the first part of the season to a scarcity of bait. The dog-fish were about as plentiful as usual.

The latter part of the season there was a fairly good run of haddock in the vicinity of Canso, but the weather was so stormy that the boats could not attend them regularly, consequently the catch was small.

The closed season for lobsters was well observed on this coast, with the exception of Dover and vicinity; we find a few there that still persist in trying to fish every fall and it is very difficult to get hold of the parties as they are kept well informed of the cutter's movements and work accordingly. I would recommend that a steam launch be stationed in that vicinity during the closed season as I believe by doing so it would put a stop to this illegal fishing altogether.

I have the honour to be, sir,

Your obedient servant,

JOHN GRAHAM,

Commanding Cruiser 'Osprey.'

C. G. S. 'VIGILANT,'

WALKERVILLE, ONT., December 4, 1906.

C. pt. O. G. V. SPAIN, R.N.,

Commanding Canadian Marine Service,

Ottawa, Ont.

SIR,—I beg to present my second annual report of the work performed by the C. G. S. 'Vigilant.'

On April 14 at 1 p.m. hoisted penant and placed ship in commission and departed down river to Amherstburg, where we took on board 44 tons of coal. On April 15 I seized 125 American gill nets containing a small catch of fish. The nets were 12 miles east of Pelee island and 4 miles north of boundary. We saw two other buoys in neighbourhood, so anchored for the night in nine fathoms of water. On the 16th I seized 42 American gill nets near the former seizure. On the 20th we conveyed the engineer and his wife from Amherstburg to the southeast shoal lightship. On May 21 we departed for Cleveland to have compass adjusted. May 24th, by instructions, the ship was taken to Windsor for the purpose of assisting in celebrating the day. The citizens and other parties were very much disappointed because we could not fire a royal salute. The ship, however, was placed at the disposal of the Minister of Militia for the purpose of conveying the officers to Walkerville where a banquet was given by Messrs. Walker Sons. On June 2, having received instructions to proceed to Middle island to inquire into the cause of the light being out of service, I arrived there at 2 p.m. and found that the lightkeeper had deserted, apparently for over a week. After consulting with parties on Pelee island, I placed John L. Lidwell in charge of the light. I have since visited the light several times and found he was performing his duties very satisfactorily. On the 7th I went to the wreck of the American steamer 'Armenia' and took sextant angles which were subject of a separate report. On July 2, celebrating the day at Port Dover, we dressed ship and, not having a gun, fired a feu-de-joie with rifles and gave an exhibition of drill in the park. On July 10th Messrs. B. Fraser and F. Foster came on board at Kingsville and were conveyed to Middle Ground lighthouse, afterward Mr. Foster was landed on Pelee island. We then departed coastwise for Port Stanley. On July 11 Mr. Fraser inspected the light and fog signal at Long point and proceeded on to Port Colborne. On the 12th at Mr. Fraser's request, I accompanied him, to the lighthouse on the breakwater at Port Colborne to select new location for the range

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lights. On July 31st, at the request of the Chief Engineer, Col. Anderson, I examined the crib-work of the Middle Ground lighthouse, sending in a special report. On August 17th I seized 70 American gill nets near Long point. On the 20th I seized 99 American gill nets also off Long point. On September 8 we sighted an American tug lifting nets north of the line. On our approach she ran south across the boundary. We sighted buoy where she had left and started lifting nets. They were fouled on the bottom and we only procured two. On the 21st I seized a small American fishing tug the *William D.*, of Erie, 10½ knots west of the extreme end of Long point. I took the captain on board the ship and logged the distance into shore, he acknowledged he was fishing in Canadian waters. I gave the tug in charge of the customs authorities at Port Dover. On the 25th I took two gentlemen from Port Dover to witness the logging of the distance from Long point to the gas buoy at Erie, as there had been considerable dispute and correspondence with reference to the distance and location of the boundary. On October 2nd I stopped at the wreck of the *Armenia* and took sextant angles, which was reported. I also took angles of the *Chas. Packard*. October 5th, by arrangement, I met Capt. E. Chaytor of the U. S. Revenue Cutter *Morrill* at Erie. He informed me he was instructed by Washington authorities to confer with me as to location of the boundary line as given on the American hydrographic charts. He became convinced that my contention all along was correct and he sent in a very satisfactory report to Washington which has since had a very marked effect upon the actions of the fishermen. I had done what I could to bring this meeting about, being quite convinced that when I had an officer and a gentleman to deal with that there would be no trouble in arranging the matter. Five temporary buoys were placed by Capt. Chaytor on the line as indicated on the above-mentioned chart, and some days afterward I verified their correctness. On the 8th, having received a telegram to meet the Canadian section of the Waterways Commission at Toronto, I departed that evening and returned on the 10th. On 29th, after lying at Kingsville for over a week, the weather moderated sufficiently for me to sweep over the wreck of the *Tasmania* to ascertain if the contractors had completed the work according to contract, all of which was reported to the deputy minister at the time. On November 16th, having received a telegram to meet you at Windsor on the 17th, I proceeded at once to that place where you inspected the ship. November 24th we passed close to the stranded steamer *Conemaugh* near the end of Pelee point and the *Hurlbert* near Leamington. The latter vessel has been released, subject to report. On November 28 I seized 30 American gill nets east of Pelee island and north of boundary. There was too much sea to lower boats, but managed to lift the above number over the ship's side. On December 1, I proceeded to Walkerville to lay ship up in winter quarters.

REMARKS.

In this report I wish to relate a conversation which I had with a Mr. Munson, of Cleveland, who is a fish dealer and owns several fishing tugs. He stated that when I seized some nets belonging to one of his tugs, the customs officer in Cleveland seized his tug, saying that it was in the public press that I had seized the nets in Canadian waters, and fined him a substantial fine. He appealed to Washington, but the authorities there sustained the action of the customs officer.

As I suggested some time ago, could not some arrangement be made with the American government, so that this action might be regularly established at all ports? It would greatly assist in putting down poaching.

There was very much less poaching during the past season than any former year. This is partly accounted for by the strike of the fishermen at Erie and Dunkirk, and also by the fact that the report of Capt. Chaytor of the U.S. S. *Morrill* was very strong in my favour.

Fishing on Lake Erie during the summer in most places was light, but the fall

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catch was better than for some years past, more especially off Port Dover and Port Stanley.

During the season the ship logged 16,582 miles.

I have the honour to be, sir,

Your obdient servant,

E. DUNN,

Commanding C.G.S. 'Vigilant.'

C.G.F. CRUISER 'KESTREL,' November 5, 1906.

Commander O. G. V. SPAIN,

Commanding Canadian Marine Service,

Ottawa, Ont.

SIR,—I have the honour to submit to you my report of the work done by the Canadian Government Fisheries Cruiser *Kestrel*, under my command, patrolling the waters of the coast of British Columbia, for the year of 1906.

Leaving Vancouver on January 3, we cruised south as far as Esquimalt, where we received on board 500 rounds of ammunition from H.M.S. *Shearwater*; we then cruised northward, taking in the different harbours, bays, and fishing stations *en route*.

At noon on the 5th, I swung ship to test our compasses; on the 6th we took on board 90 tons of bunker coal at Union bay.

Leaving here, we continued our cruise northward, visiting all fishing stations as usual, arriving at Port Simpson on the 11th.

At 11 p.m., the same evening, Captain Oliver of the SS. *Nell* reported to me that his steamer had just broken adrift in Chatham sound, from two tugs which had her in tow, and was full of water and drifting a helpless derelict in Chatham straits; he also asked me for my assistance and advice.

I at once offered to do all in my power to help him. Leaving at daylight next morning, we proceeded in search of the vessel, and found her stranded on Ryan point, having during the night driven in over Hodson reef.

As it was blowing a gale at the time, with a high sea running, we could not render any assistance, so returned to Port Simpson and landed Captain Oliver and crew.

The following two days it blew a gale of wind from the North and on the 15th I took Captain Oliver and crew to Port Essington.

Leaving Port Essington I proceeded to Hecate Straits on my regular patrol duties; from the 16th to the 19th we were cruising these waters and vicinity, visiting Butler cove, Refuge cove, and Spiller river.

Leaving here we proceeded to Port Simpson for our mail, where we were detained until the 24th by an exceedingly heavy gale and blinding snow squalls.

Leaving here we cruised south, taking in all stations *en route*, arriving in Vancouver at 3 p.m., on February 1, where I received your orders to proceed to Victoria at once, as I had been appointed one of the assessors to sit on the court of inquiry regarding the loss of the United States steamship *Valencia*.

The *Kestrel* remained at Vancouver, until the 11th, washing out boilers and making slight repairs, &c., and on this date I took her to Victoria where she was under my direct care until my duties as assessor at this port were finished.

On the 28th we started on regular patrol duty, making short cruises among the Gulf islands, and on the 22nd of March, while at Pender harbour, I located a very dangerous uncharted rock which was at once reported to you, and notices were at once issued by the department giving the position and bearings of same.

Leaving here we proceeded to Union for bunker coal: after receiving coal we left for Bon Accord Hatchery, where we took on board 4,000,000 salmon fry for distribution in the rivers and lakes on the west coast of Vancouver island.

Arriving at Euchucklusit we liberated 750,000 fry in the river and leaving here we cruised up Alberni canal to the head where we liberated another 75,000.

We then cruised along the coast to Clayoquot sound, where we deposited the remainder of the fry in Kennedy river.

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Leaving here we continued our cruise along the west coast to Cape Scott, calling at the whaling station at Sechart bay, Nootka and other stations en route.

When off Hesquoit in a south east gale, we carried away our rudder stock, but by careful manipulation and good seamanship we managed to continue our cruise and bring the ship home in safety, arriving at Vancouver on April 5.

I immediately notified you of our accident and received orders to dock ship and make repairs; I at once put ship into dock, and on examination found that the rudder stock had been defective and that a new rudder had to be made, thereby necessitating much delay and expense.

Whilst on dock we gave ship a thorough overhauling from keel to trucks, and coming off the dock on the 21st, I immediately got ship ready for sea and on leaving Vancouver on the 23rd we again started on our regular patrol duties.

On the 24th I spoke the steamship *Dauntless*, with shaft broken, but declined assistance; we cruised as far north as Goose island, calling at way stations, and sighting several fishermen en route, on the 27th at 8.30 a.m., I sighted a schooner well in shore, with two dories out, apparently fishing under the lee of Hope island; I immediately gave chase.

At 8.44 he took dories on board and made off shore; at 9.15, I spoke him and made him heave to; this vessel proved to be the motor schooner *Norman Sunde*, of Seattle.

Chief Officer Moore and crew boarded and searched him and found that he had destroyed all evidence of his having been fishing by sinking the gear, fish, &c., and we could not find evidence enough to warrant his seizure outside the limit, as he was now five miles off shore.

I warned him and let him go, he happy, and I disappointed at not having a faster boat.

From here we cruised to Hardy bay, where I inspected the oyster bed planted by Captain Kemp and myself a year ago, but could not find any trace of the oysters.

We again cruised south calling at all the stations, arriving at Vancouver on May 2, and on the 5th we left again, cruising along the west coast, Queen Charlotte sound and Hecate straits, where we remained cruising until the 25th, when we returned south, arriving at Vancouver on the 29th.

After settling up our business here we left on the 4th of June for the west coast where we cruised the remainder of the month.

On the 8th, while cruising in Quatsino sound, I located a rock drying 4 feet at low water where four fathoms was marked on the chart, and again on the 26th while entering Village bay, I located another very dangerous uncharted rock in the entrance of the bay.

Both of these obstructions were reported to you, and 'notice to mariners' was issued respecting said uncharted rocks.

During the early part of July we made a short cruise up to the head of Jervis inlet, calling at all fishing stations en route, returning on the 8th.

On the 10th we left again for the northern cruising grounds, taking Professor E. E. Prince and Rev. Mr. Taylor, the committee appointed by the Fisheries Commission to inspect and investigate the northern waters, &c.

We called at all stations, visiting all canneries, hatcheries, and fishing stations, as far north as the Nass river, besides doing a lot of dredging in the different harbours, bays, inlets, Hecate straits, Banks island, Works channel, and Dixon's entrance.

Whilst dredging as above stated and when abreast of Tow hill, off the north end of Queen Charlotte islands, we located an extensive bed of very large Scollops lying in a depth of from 9 to 40 fathoms of water, which may have already been reported upon by Professor Prince and Mr. Taylor.

During the above stated cruise I located a very dangerous uncharted rock at the entrance of Prince Rupert harbour.

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I notified shipping as far as I could, but unfortunately two days later the steamship *Camosun* struck on said rock, costing her \$32,000 for repairs; I reported this danger to you on the first opportunity and notice in Notice to Mariners was immediately published giving particulars and naming it 'Kestrel Rock.'

After washing out boilers and finishing our work here we left again on the 7th for another cruise north, taking Mr. Stewart, the chief hydrographer of the Marine and Fisheries Department with us.

We cruised the northern coast visiting all stations, lighthouses and Hecate straits; at Prince Rupert we lay for two days, Mr. Stewart making scientific observations for variations; we then proceeded to Port Essington where Mr. Stewart left us, much to our regret.

From here we cruised southward through Hecate straits, Queen Charlotte sound, and west coast, visiting all way stations; on the 19th at Spiller river I arrested the sloop *Star*, of Seattle, and sent her to Port Simpson to report at the customs.

On the 22nd I sighted one of the large United States steam fishermen in the act of lowering dories to fish, one mile off Mexicano point; I immediately gave chase but had the humiliation of seeing him run away from us, again losing a prize worth at least \$30,000.

Continuing, we cruised down the west coast meeting many fishermen; at Nootka I drove two schooners, the *Yukon* and *Mars*, out of port, they were halibut fishermen in for a good time, but as they had made the acquaintance of the *Kestrel* before, they lost no time in getting out as part of the crew of these vessels were on the *North* when I captured her a year ago.

We continued cruising southward around Vancouver island, arriving at Vancouver on the 29th.

During this cruise we discovered two new and important halibut banks, one off Kyuquot on the west coast, also another which lies off Nootka on the west coast of Vancouver island.

During the month of September we were cruising between Vancouver and Triangle island, which lies away to the westward of Cape Scott at the north end of Vancouver island, visiting the different, bays, inlets, harbours, &c.

On the 17th I seized at Albert bay, the United States schooner *Ragnild*, of Portland, Oregon, for violation of the customs laws, and towed her to Vancouver, where I delivered her to the collector of customs, and made a seizure report of same to the Minister of Customs at Ottawa.

On the 27th we left for a cruise among the gulf islands calling at several stations, also at Victoria.

Returning to Vancouver we again fitted out for a cruise in northern waters taking Mr. E. S. Busby, inspector of customs, and his assistant, Mr. D. M. Stirton, along with us on official duties.

Calling at Union bay for coal, Mr. Busby inspected the customs at this port.

Leaving here on the 18th we proceeded north calling at Alert bay where our official duties were attended to; from here we proceeded to the west coast of Vancouver island as far as Quatsino sound, where Mr. Busby inspected the customs at Winter harbour.

Leaving here we proceeded north to Port Essington, Port Simpson, Maple bay, and Stewart city; returning we called at Port Simpson, from there we went to Ketchikan where we gained much information, both for the Fisheries and the Customs Departments.

Returning south we called at Prince Rupert and way ports, arriving at Vancouver at 8 p.m. on November 5, after a very stormy passage.

REMARKS.

I have divided our cruising grounds into three districts as shown by United States chart No. 7000, district No. 1 having 635 miles of coast line, district No. 2 having 420 miles of coast line, and district No. 3 having 320 miles of coast line; the

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above figures do not include the bays, sounds, inlets and cost indentations, simply the straight coast line on this chart.

I have marked the known deep sea fishing banks, also two halibut, one grey cod, and one scollop bank discovered by me during the past summer which I have marked '1906—H.N.'

I have also marked the halibut banks which I discovered during the year 1903, which I named the Kestrel Bank, and Gordon Bank, the former lying off Goose island, which is in district No. 2, and is marked, viz., '1903—H.N.,' the latter bank lies between Ross Spit and Skidigate in district No. 1 and is marked, viz., '1903—H.N.'

During the year 1904 I discovered two Halibut banks, and one black cod bank, the first halibut bank discovered lies off the Walker group, in district No. 2, and is marked 'No. 1, 1904—H.N.,' the second halibut bank discovered during the year 1904 lies off Deer passage, Seaforth channel, in district No. 2, and is marked, viz., 'No. 2, 1904—H.N.'

The black cod bank discovered, lies off Cone island in Finlayson channel, in district No. 2, and is marked, viz., '1904—H.N.'

United States chart No. 7000, outlining districts Nos 1, 2 and 3 showing Deep Sea Fishing banks as above stated, I have mailed addressed to you under separate cover of registered mail.

Referring to the 39,334,329 lbs. of halibut caught during the year 1906 by foreign fishermen in the waters off the coast of British Columbia, I beg to state that said amount is accounted for as follows :—

	Lbs.
The New England Fish Company.. . . .	9,414,330
The Tacoma Fish Company.. . . .	7,946,666
The San Juan Fish Company.... .	3,973,333
Taken by the smaller crafts.. . . .	18,000,000
Total catch.. . . .	39,334,329

The above stated companies employ large boats which operate twelve dories each and fish with from twelve to twenty-four miles of trawls for each steamer.

The 18,000,000 lbs. taken by the forty odd smaller crafts were caught in districts Nos. 2 and 3, mostly in the latter district; these crafts operate from two to four dories each and about one miles of trawls to a dory.

Each and every one of the above craft, frequent and clean their fish in the harbours of British Columbia when the *Kestrel* is not there to prevent this violation of our laws and the destruction of our in-shore fisheries, as it is a well known fact that fish will not frequent waters where dead fish and offal are disposed of.

In connection with the above it might be well to here state that when the foreign fishing vessels (herein referred to) are on the fishing grounds following up the halibut, when setting their trawls they often find that the halibut are not on the grounds, and instead of catching halibut they catch black and grey cod, which valuable fish are thrown overboard and destroyed; not only are tons upon tons of these valuable fish wasted each year, but the fishing grounds are depleted for as I have already stated, fish will not frequent waters where dead fish or offal are disposed of.

I would most respectfully and earnestly recommend that the solution of the predatory fishing in the coast waters of British Columbia is, viz., one first class up to date cruiser, about 200 feet length of keel, with a speed of not less than 20 to 22 knots (not miles) be placed in commission and ready for service within the next six months and be equipped for general service and to carry at least four fast motor launches with which to protect the coast harbours against foreign fishermen cleaning their fish in said harbours.

This cruiser to be followed at the earliest possible date by the construction of two smaller cruisers, about 120 feet in length (fishermen type of vessel) with a speed capacity of 18 knots, each vessel to be equipped with one fast motor launch.

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My reason for asking for this type of vessel is first, that they would be able to put to sea when the fishermen do; second, there are at the present time foreign craft frequenting our waters with a speed capacity of 15 knots, and a cruiser to be of service should not only run as fast as its opponent, but be able to overtake it; this combined with the facts that during the different months of the year the west coast of British Columbia is visited by severe gales which these vessels are liable to be caught in and would have to contend with, it is therefore imperative that none but first class vessels should be put into commission in this service.

My reason for asking that the above stated vessels be put into commission at as early a date as possible is, viz.: During the year 1903 there were 16 United States fishing vessels (three steamers and thirteen schooners) engaged in fishing halibut off the coast of British Columbia.

During the present year the fleet of United States fishing vessels engaged in fishing halibut in the waters of the coast of British Columbia comprises six steamers and forty other vessels which I have been able to locate, making a total of 46 craft, which is an increase of 30 vessels in three years; this combined with the discovery of new fishing grounds accounts for the increased catch of fish, thus the depleted fishing grounds are not noticed.

Some of the halibut banks upon which the halibut were caught in the beginning of the halibut fishing in the coast waters of British Columbia, fifteen years ago, are now depleted, and the fishermen do not fish there.

I would respectfully recommend that all foreign vessels frequenting or entering the harbours, or passing through the coast waters of British Columbia, be required to report inwards and outwards at the nearest customs office, and failing to do so be liable to the penalty provided by the Customs Act, as during the present year I have boarded 21 fishing and two other vessels in British waters (one of which I detained and the other I seized), which were without customs papers of any kind.

If this were done it would be a valuable aid to me in determining the name and number of foreign vessels fishing in the waters off the coast of British Columbia, and also be a detriment to their poaching in said waters.

I would also respectfully urge upon the department the necessity of the above stated cruiser being placed in commission at the earliest possible moment, as at the present rate at which our 'halibut fishing grounds' are being depleted by foreign fishermen as above set forth, in another six years these now valuable fisheries will be fished out and be worthless, and we will have no fishing industry to protect, and a valuable asset to the Government of Canada will have ceased to exist.

I am, sir,

Your obedient servant,

HOLMES NEWCOMB,

Commanding D. C. 'Kestrel.'

FISHERIES INTELLIGENCE BUREAU,

HALIFAX, N.S., January 31, 1907.

Commander O. G. V. SPAIN, R.N.,
Commanding Marine Service,
Ottawa.

SIR,—I have the honour to submit the following list of officers in connection with the Fisheries Intelligence Bureau for the season of 1906.

There were three stations established during the season in the province of Quebec, viz.: Barachois de Mal Baie, in charge of Miss Roxie E. D. Tapp; Bonaventure, with Mrs. R. N. LeBlanc as reporter, and Sandy Beach in charge of Mrs. George Howell.

New reporters were appointed at Escuminac point, N.B., in the person of Thomas Kingston; Captain Benjamin, R. Smith at Port La Tour, N.S., George Hamm at Sambro, N.S., Miss J. A. Trachy at Paspébiac, Que., and N. P. Freeman at Liverpool, N.S., vice Captain J. H. Dunlop, a very capable and efficient reporter, whose demise was recorded July 2.

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List of Fisheries Bureau Reporters outside the Civil Service.

Residence.	Name.
Alberton, P. E. I.	David Montgomery.
Arichat, C. B.	J. T. Jean.
Barachois de Malbaie, Que.	Miss Roxie E. D. Tapp.
Bonaventure, Que.	Mrs. R. N. LeBlanc.
Bloomfield, P. E. I.	Edmund D. Kelly.
Canso, N. S.	John E. Cohoon.
Caraget, N. B.	Mrs. E. Blanchard.
Clark's Harbour, N. S.	J. L. Nickerson.
D'Escousse, C. B.	John P. Gruchy.
Gabarus, C. B.	James Nichol.
Gaspe (Douglstown) Que.	Charles Viets.
Grand Pabos, Que.	Mrs. Mike Murphy.
Grand River, Que.	Mrs. J. Carbery.
Ingonish, C. B.	Godfrey Jackson.
Isaac's Harbour, N. S.	Simon M. Giffin.
L'Anse aux Gascons, Que.	Mrs. A. F. Brotherton.
L'Ardoise, C. B.	J. M. McIsaac.
Long Point Mingan, Que.	A. Maloney.
Lunenburg, N. S.	W. A. Zwicker.
Magdalen Islands, Que.	J. A. LeBourdais.
Main-a-dieu, C. B.	G. W. Dickson.
Malpeque, P. E. I.	Hume Hopgood.
Meat Cove, C. B.	A. B. MacDonald.
Newport Point, Que.	Mrs. M. Muenier.
Paspebiac, Que.	Miss J. A. Trachy.
Perce, Que.	E. G. Tazo.
Point Escuminac, N. B.	Thomas Kingston.
Point Saint Peter, Que.	Mrs. M. J. Bond.
Port La Tour, N. S.	Capt. Benjamin R. Smith.
Port Malcolm, C. B.	R. C. Proctor.
Port Mulgrave, N. S.	David Murray.
Salmon River, N. S.	Arthur Balcolm.
Sambo, N. S.	George Ham.
Sand Point, N. S.	John A. R. Morrison.
Sandy Beach, Que.	Mrs. George Howell.
St. Ann's, C. B.	Thomas D. Morrison.
St. Adelaide de Pabos, Que.	Mrs. A. LeMarquand.
St. Peter's, C. B.	Angus J. MacCuish.
Seven Islands, Que.	P. F. Vignault.
Shippigan, N. B.	Mrs. M. J. Robichaud.
So. West Pt. Anticosti, Que.	Mr. Z. LeMieux.
Queensport, N. S.	William Knowlan.
Whitehead, N. S.	J. E. Dillon.
Yarmouth, N. S.	F. L. Hatfield.
Port Daniel, Que.	Miss Isabella Sweetman.
Spry Bay, N. S.	Elmer C. Leslie.

List of Fisheries Bureau Reporters who are Government Officials.

Arichat West, C. B.	C. P. LeLacheur.
Cheticamp, C. B.	Chas. F. AuCoin.
Digby, N. S.	J. M. Viets.
Georgetown, P. E. I.	Chas. Owen.
Grand Manan, N. B.	Charles Dixon.
Hawkesbury, C. B.	J. C. Bourinot.
Liverpool, N. S.	J. H. Dunlop (deceased).
"	N. P. Freeman (act'g. collector).
Lockeport, N. S.	J. R. Ruggles.
Louisburg, C. B.	H. C. V. LeVatte.
Mabou, C. B.	Lewis McKeen.
Margaree, C. B.	M. A. Dunn.
Musquodoboit, N. S.	George Rowlings.
Petit-de-Grat, C. B.	P. T. Fougere.
Port Hood, C. B.	F. D. Tremaine.
Lo. East Pubnico, N. S.	J. A. D'Entremont.

APPENDIX No. 14.

REPORT OF THE CANADIAN FISHERIES MUSEUM.

To the Deputy Minister
of Marine and Fisheries.

SIR,—The following report, which I have the honour to submit, embraces not only a general summary of the museum collection, but also descriptive remarks on the vertebrate portion, and more especially on that of the fishes; after the manner of the guides to the galleries of the British Museum.

Numbers meanwhile are omitted, because having made an estimate of how many species of fishes are indigenous to the Dominion, I have provisionally placed the number somewhere between five and six hundred, of which only about one-fifth are as yet represented in the museum; so that should it be the intention of the department to aim at having the collection represented by a full compliment of specimens, the use of numerals just now would eventually be disturbed by the instalment of subsequent acquisitions, as well as of some in hand awaiting determination, as to their respective places in the collection.

During the current year certain additions have been made to this class, some of which were obtained by Mr. Finlayson, inspector of fish hatcheries, at the salmon weirs, St. John, N.B. There have also been added a few specimens of reptiles and birds.

Besides the natural history objects the museum contains the models of a schooner, various vessels, hulls, and canoes; also fishing implements, fish oils, and a large cedar Haida dug-out. These have lately been laid out to advantage by Mr. Urgel Grignon, the caretaker, who has likewise been employed in making the museum an attractive institution.

During the current year the museum has been visited by some 15,500 persons.

The descriptive remarks are based on personal observations in the open field, examinations of specimens in museums and in the laboratory, references to all accessible publications on the subjects treated of, and consultations with naturalists.

Special reference has been made to Drs. Jordan and Evermann's invaluable work: 'The Fishes of North and Middle America,' and to Dr. Günther's 'Introduction to the Study of Fishes.'

The animal kingdom is primarily divisible into various sub-kingdoms, all of which are more or less represented, some entirely so, by creatures which live in the salt and fresh waters. As stated above, the remarks in this report are on the vertebrata, the highest of these sub-kingdoms, the first and lowest class of which are the fishes.

The rest of the report, treating of the invertebrate portion of the collection, remains substantially as it did in that of last year.

SUB-KINGDOM: VERTEBRATA (*Vertebrates*.)

Vertebrates are the highest sub-kingdom of animals. Any group of creatures below them, and above that to which corals and sea anemones belong, are characterized by being morphologically composed of a sort of single tube, which incloses a heart, a digestive track, and nerve centres (often bilateral and ganglionated). A sea-urchin, a worm, a snail, a lobster, a bee, belong to this type. It is needful to extend this ideal illustration, however, in the case of any vertebrate, as, for example, a salmon, a frog, a serpent, an eagle, a seal, or a man, into another tube, which is attached to the first,

and which incloses the spinal system of nerves; so that a vertebrate has, not only a heart, a digestive-track, and nerve centres answering those of invertebrates (and known as the sympathetic nervous system), but in addition the great mass of the cerebro-spinal nervous system.

There are certain creatures, notably the ascidians, or tunicates, popularly known as sea-squirts which, although in the early stages of their life histories manifesting rudiments of a spinal-chord are not universally admitted among the vertebrates. There are few things more interesting to biologists than a study of these.

The little creatures from which the mature ascidians evolve swim actively about like tadpoles, and in fact are just tadpoles in their structure; and possess the elements of a spinal column. But after a while, with the exception of a comparatively few which move freely about in the adult stage, they attach themselves, by their heads, to rocks or other submarine objects, and become permanent fixtures, all their organs undergoing strange modification and atrophy. They are then in fact, in the mature forms, creatures of retrogression, having gone backward instead of forward in the scale of organized beings.

Another remarkable worm-like creature is technically known as *Belanoglossus*. It also (as well as one or two allied forms¹) has a structure 'supposed to be homologous with the notochord,'² and nerve strands.

But without further reference to such forms as the ascidians and *Balanoglossus*, which must be looked upon perhaps as degenerate off-shoots adjacent to the ancestral rootlets from whence the sub-kingdom of vertebrates sprang, and whose proper affinities await more zoological light, we are practically warranted in confining a consideration of the vertebrates to the five classes which they indisputably embrace, viz.: the fishes, batrachians, reptiles, birds and mammals; for all the members of these throughout their lives possess, either in an elementary³ or fully developed condition, a spinal column.

In a typical vertebrate, the brain and spinal chord are protected in a framework composed of a skull, and a chain of bones called vertebrae, in conjunction with which are the bones of the thorax or chest, and those of the scapular arch and pelvis, to which are usually appended the bones of the limbs, but the modifications of the skeleton, including the limbs, in the several classes, are exceedingly varied.

The limbs are ordinarily in two pairs, never more, the anterior and the posterior; and, although endlessly modified, are constructed according to a similar plan. In other words: the pectoral fins of a fish, the wings of a bird, the front legs of a dog, or the arms of a man, are homologous organs. Some vertebrates, for instance, certain fishes (such as eels and the sword-fish) and whales have the anterior pair of limbs only; whilst others (such as serpents, coecilians, and muranoid-eels) are entirely devoid of limbs. The whales and some serpents (such as boas and pythons) however, possess rudimentary pelvic elements. Instances such as the above are due to evolutionary loss of the limbs; but in the limbless lancelets, and may be the cyclostomes (lampreys and hag-fishes) the reverse is the case; the limb as a feature in vertebrate development not having made its appearance until creatures organically higher in the scale of life, than those primitive forms are, were reached.

CLASS: PISCES (FISHES).

Midway, as it were, with the innumerable hosts of invertebrates behind them, and the higher vertebrates in front of them, the Fishes hold rank among the great zoological lineages. No sharp line demarks them entirely from certain batrachians, but they may be characterized as vertebrates so organized as to be enabled to pass the

¹ *Cephalodiscus* and *Rhabdopleura*.

² Drs. Parker and Haswell 'Text Book of Zoology,' vol. II., p. 3.

³ *Amphioxus*.

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whole period of their existence by living and respiring in water. This does not imply, as we shall see, that no fishes exist which cannot for a time live, and even breathe, out of water; nor does it imply that no other vertebrates do not pass the whole of their lives under water, for some batrachians do.

Some one, somewhere, has remarked that it would seem as if this planet had been especially created for fishes, and, indeed when we consider the enormous size of some of them; the prodigious schools or shoals of others; the fact that multitudes of kinds inhabit the ocean, severally, from its surface to its abysmal depths, and at its shores and estuaries, whilst others of brilliant hues dwell among coral reefs; that lakes, rivers and streams team with very varied members of the finny tribe, that a few even dwell in darkness in subterranean rivers, and furthermore that there are some thirteen thousand species of known fishes, this idea might almost be conceded.

Their function of breathing under water leads to a consideration of their respiratory organs—that is the gills. These organs are not homologous to the lungs of other vertebrates, and the lung of a dipnoid fish (see p. 326) is an organ altogether independent of its gills by which it ordinarily breathes. The gills are variously modified: in lampreys and sharks they lead to a number of external openings on either side, but in the higher fishes they are usually in folds, protected by bony opercular covers, forming a pair of clefts, one on either side. The water, charged with free oxygen enters the mouth of the fish, passes on to the gills, and is then expelled through their clefts; and the function of the gills is to arrest the oxygen held in the water in order to oxygenate the blood.

The fins of fishes are of two kinds: the vertical and the paired. The vertical fin may be (but more rarely) a continuity, commencing on the back, proceeding around the tail, and terminating at the vent; or it may be (as is usually the case) broken up into the dorsal, caudal, and anal fins. Certain of the fins, or all of them, are sometimes wanting. The paired fins are the limbs of fishes. The pectorals are the front, the ventrals the hind pair. A few have no pectorals, such as lancelets, lampreys, hag-fishes, and muraenoid-eels; and still more have no ventrals.

In teleosts (with a few exceptions) the pectoral arch is joined to the cranium or skull by a bone called the *suprascapula*, but in selachians (sharks and rays) there is no such attachment, the shoulder girdle being free from the head as in other vertebrates. Suspended from the suprascapula is the *scapula*, which in turn gives attachment to the *clavicula*, with an appendage called the *post-clavicula*. The bones of the pectoral fin, or fore limb, in teleosts, are attached to the clavicula, and a small bone associated with it 'in some osseous fishes, at least in their immature state' may according to Owen answer to the *humerus* (Owen: 'Anatomy of Vertebrates,' vol. I., p. 165), but that bone is not well defined in fishes. Following this are two flat bones, the under one the *radius*, the upper the *ulna*; to which are attached a series of small ossicles, the combined *carpals* and *metacarpals*; which are followed by the pectoral rays which answer to the anterior digits. The pectoral fins are situated more or less behind the gill apertures.

The situation of the ventral fins differs in the several groups of fishes, and their constituents are not so well defined as are those of the pectorals. In selachians, ganoids and physostomes, they are abdominal, or far behind the pectorals; in many teleosts they are thoracic, or placed below the pectorals; whilst in gadoids and others, they are jugular, or in front of the pectorals. A pair of bones constitutes, in teleosts, the entire pubic arch. These are joined together anteriorly, but diverge towards the right and left fins respectively. To the pubic bones are attached the ventral rays which answer to the posterior digits.

The absence of ventral fins is a more frequent feature than is that of the pectorals. They are wanting in all fishes without pectorals, and in eels, the adult sword-fish (*Xiphias gladius*), in one ganoid (*Calamoichthys calabaricus*), in certain blennies, pipe-fishes, and sea-horses, and in many others.

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The fin-rays (either of the paired or vertical fins) are variously constructed, but whether simple, articulated, branched or forming spines, are always associated with the piscine skeleton, and the absence or presence of this or that kind of ray has much to do in determining the relationships of fishes.

The bodies of fishes are very often covered with scales which have been distinguished as placoid, ganoid,¹ cycloid, and ctenoid; the first term, however, is hardly admissible and is being abandoned, the so-called placoid scales being merely 'ossified papillæ of the cutis,'² instead of having their origin, as a true scale, like a feather or a hair, has in grooves of the underlying dermis. Along the sides of many fishes are lines, generally one on either side, called the lateral lines, and the scales which cover them are perforated, forming outlets to what are known as the muciferous ducts, but the lateral lines are variously modified, and in some fishes do not exist at all.

Fishes may conveniently be divided into the following five sub-classes:—

Leptocardii (Lancelets).

Marsipobranchii (Lampreys and Hag-fishes).

Selachii (Sharks, Rays and Chimæras).

Ganoidei (examples: Dipnoids, Sturgeons and Gar-pikes).

Teleostei³ (True-boned fishes, embracing the vast majority of the extant species).⁴

SUB-CLASS : *Leptocardii* (Lancelets).

The Lancelets are the lowest fishes, and some zoologists decline to admit them into the class at all. Their vertebrate characters, however, in certain respects are obvious. True, there is no bony skeleton, but there is a noto-chord which terminates as a point anteriorly just as it does posteriorly. The branchial or gill-clefts are numerous, and lead to a single aperture called the abdominal pore. There is a mouth, preceded by an oral-hood, bordered with cirri or tentacles, also what answers to a rudimentary brain⁵, and a vertical fin. There are some eight species of Lancelets, mostly referable to the genus *Branchiostoma* (otherwise known as *Amphioxus*), which inhabit the coasts of many seas, and which bury themselves in the mud.

SUB-CLASS: *Marsipobranchii*=*Cyclostomata* (Lampreys and Hag-fishes).

A considerable advance is met with in vertebral morphology when we reach the Cyclostomes. The skeleton is cartilaginous. There is in the Lampreys a suctorial and jawless mouth, well furnished with teeth, a pair of eyes, a single medium nostril,

¹ 'This type of scales common in fossil ganoid fishes occurs amongst recent fishes in *Lepidosteus* and *Polypterus* only.' Dr. Günther: Introduction to the Study of fishes, p. 47. Another genus, however, *Calamoichthys*, has ganoid scales, but doubtless Dr. Günther includes it in *Polypterus*.

² Dr. Günther: Ibid, p. 48.

³ No hard and fast line can be drawn in regard to this term, because among ganoids: the gar-pikes (*Lepidosteus*) and *Amia calva* have the skeleton ossified; whereas certain teleosts (salmonoids for instance) have elements of cartilage in the cranium.

⁴ The sub-classes Leptocardii and Marsipobranchii are removed from the class Pisces by Drs. Jordan and Evermann altogether and transferred as two classes by themselves. After their removal they divide the remaining North American Pisces into the sub-classes Selachii, Holocephali and Teleostomi. In this arrangement the Chimæridæ (Holocephali) are removed from the Selachii, and the Teleostomi embrace as two series the Ganoidei and Teleostei. Weighty reasons are advanced by these ichthyologists for this arrangement, and deference is paid to them. On the other hand, Dr. Günther unites the Selachii (including the Chimæridæ) and the Ganoidei in the sub-class Palæichthyes, and leaves the Teleostei by themselves. For the purposes of this report it appears convenient to include the Leptocardii and Marsipobranchii in the class Pisces; and to distinguish the Selachii, Ganoidei and Teleostei, as three sub-classes.

⁵ The lancelets have been spoken of as having no brain; but the 'anterior end of the neuron..... is to be looked upon as the brain, although not distinguishable externally from the remaining portion or spinal cord.' Drs. Parker and Haswell: Ibid, p. 48.

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seven gill apertures on either side, and one or more vertical fins. They live by attaching themselves by their disks to other fishes, and rasping the flesh off with their teeth. Some of the Hag-fishes on the other hand bore their way into the flesh of their victims, and on account of this there is a single gill opening, on each side, placed far back from the head, which communicates with the branchial pouches; but those of the genus *Bdellostoma* have six or more gill apertures on either side.

Lamprey Eel (*Petromyzon marinus unicolor*, De Kay). In formalin. Specimen from old salmon retaining pond, Carleton, N.B.

Silvery Lamprey (*Ichthyomyzon concolor*, Kirtland). In formalin. Specimens from Detroit and Ottawa rivers.

SUB-CLASS: *Selachii* (Sharks, Rays, and Chimæras).

In this sub-class a character is encountered, afterwards ordinarily persistent in vertebrates that of possessing paired limbs. The skeleton is essentially cartilaginous, although there may be 'calcified rings embedded in the sheath of the notochord'¹ (*Chimæra*), or 'completely ossified vertebræ'² (*Batoidei*). The existing sharks probably number about one hundred and fifty species, but there swarmed in the seas from the Devonian to the Permian periods tribes of sharks, now extinct, which differed materially in structure, from that which their extant relations manifest. All existing sharks have five³ external gill openings, on either side, save the Notidanoids, which have six or seven. The existing known Rays number about one hundred and sixty species. They differ from the sharks (but there are gradations between the two groups) in their depressed form and greatly expanded pectoral fins, in having the eyes placed on the top of the head, whilst the mouth is inferior or more or less opposite the eyes. All possess five external gill openings, on either side, which are situated on the lower surface. None have an anal fin. The Chimæras, of which there are some six or seven species, differ, among other respects, from the Sharks and Rays in having the gill apertures covered with folds of the skin, somewhat after the manner of opercula. Many of the Selachians are viviparous, but many others are ovo-viviparous.

Porbeagle (*Lamna cornubica*, Gmelin). Mounted. Male and female specimens, from Gulf of St. Lawrence.

Picked Dog-fish (*Squalus acanthias*, L.). In formalin. Specimen from vicinity of Digby, N.S.; newly born specimen from salmon weirs, St. John, N.B.; and two foetal specimens. Mounted. Specimens from Gulf of St. Lawrence.

California Dog-fish (*Squalus sucklii*, Girard). Mounted. Specimen from British Columbia.

Starry Ray (*Raja radiata*, Donovan). In formalin. Specimen, and egg-capsule, from Atlantic coast of Canada.

Barn-door Skate (*Raja lævis*, Mitchell). Mounted. Specimen from New Brunswick.

Chimæra or Rat-fish (*Hydrolagus colliei*, Lay and Bennett). In formalin. Female specimen from near Gervis inlet, Strait of Georgia, B.C. Mounted. Male and female specimens from British Columbia.

SUB-CLASS: *Ganoidei* (Ganoids).

Long before the arrival of the teleosts, or the fishes of recent times, during Palæozoic and Mesozoic ages, the waters of the globe were indwelt by multitudes of fishes known as Ganoids. The survivors of this formerly extensive group, are comparatively

¹ Drs. Parker and Haswell: *Ibid*, p. 176.

² Dr. Günther: *Ibid*, p. 67.

³ In the Nurse Sharks (Ginglymostomidae) the 4th and 5th gill apertures are close together.

few in number, there being probably less than forty remaining species, which are embraced in the following families with their genera.

Sirenidæ: *Lepidosiren*, *Protopterus*, *Ceratodus*.

Polyodontidæ: *Polyodon*, *Psephurus*.

Acipenseridæ: *Acipenser*, *Scaphirhynchus*, *Kessleria*.

Polypteridæ: *Polypterus*, *Calamoichthys*.

Lepidosteidæ: *Lepidosteus*.

Amiidæ: *Amia*.

The surviving ganoids are of world wide distribution, all the great zoo-geographical regions of the globe, save the Indian region,¹ having their representatives. All are fresh water fishes, but certain sturgeons resort to the sea. The first three genera comprising the family Sirenidæ, mentioned above, are known as the dipnoids, because in addition to the usual gills of fishes, they are provided with a rudimentary lung, so that they are able to breath atmospheric air during the dry seasons of the countries to which they belong. There is a single species of *Lepidosiren* (*L. paradoxa*) of the Amazons and Paraguay; of *Protopterus* there is the mud-fish (*P. annectens*), and I understand another species, discovered a few years ago, both of tropical Africa, and two species of *Ceratodus* (*C. miolepis* and *C. fosteri*), both of Queensland, Australia.² There is one species of *Polyodon* the paddle-fish (*P. spathula*) abundant in waters of the middle and southern United States, but a few specimens have been found in Canadian waters, viz.: two from Lake Huron, near Sarnia, Ont. (one of which is mounted and in the collection of the museum. See below), one from Lake Helen, Nepigon river, Lake Superior, and one recorded from Lake Erie.³ The paddle-fish (save in the young),⁴ is toothless, so that its name 'Polyodon' is a misnomer. Its body is rotund in form, and there are no bony scutes as in *Acipenser*, but there may be 'minute stellate ossifications.'⁵ The head is furnished with a long paddle-shaped process, and the opercular cover provided with an elongated and tapering flap; so that measuring from the tip of the paddle to the tip of the flap, the head occupies a considerable proportion of the full length of the fish. There is a fulcrum over the heterocercal tail, above the caudal fin. The eyes are small, and placed at the base of the paddle. The genus *Psephurus*, is closely allied to *Polyodon*, and has also one species (*P. gladius*) of the Hoangho and Yantsekiang rivers of China. *Acipenser* contains at least one-half of the known species of surviving Ganoids, five of which, viz., the common sturgeon (*A. sturio*), the rock sturgeon (*A. rubicundus*), the white sturgeon (*A. transmontanus*), the green sturgeon (*A. medirostris*), and the short-nosed sturgeon (*A. brevirostris*) are North American, the first mentioned also belonging to western Europe, and all of which save, perhaps, the last mentioned are found in Canada. Of other old world species may be mentioned the sterlet (*A. ruthenus*), Gldenstadt's sturgeon (*A. gldenstedtii*) of Europe and Asia, the Hausen (*A. huso*) of rivers of the Black sea and the Sea of Azow, and the Chinese sturgeon (*A. sinensis*).

Of the genus *Scaphirhynchus* there is one species, the Shovel-nose sturgeon (*S. platyrhynchus*) of the Mississippi valley (and which possibly, as in the case of *Polyodon spathula*, see above, may yet be found in Canada, in the waters of the great lake system). *Kessleria*⁶ is closely allied to *Scaphirhynchus*, and has one or two species of Central Asia.

¹ Dr. Gnther entertains the thought that the Indian region may yet yield its representative ganoid: Ibid, p. 223.

² Fuller remarks on the Dipnoids may be found in an article entitled 'An African Dipnoid Fish,' by the author, in 'Ottawa Naturalist,' Vol. XV., Nov., 1901, p. 184.

³ Fuller remarks on the occurrence of this species of fish in Canadian waters may be found in an article entitled 'Paddle-nosed Sturgeon in Ontario,' by Prof. Prince, Commissioner of Fisheries, in 'Ottawa Naturalist,' Vol. XIII., Oct., 1899, p. 153.

⁴ Prof. Prince: Ibid, p. 157.

⁵ Dr. Gnther: Ibid, p. 362.

⁶ Very often this genus is included in *Scaphirhynchus*.

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The sturgeons are quintagonal in form, and along the margins are five rows of osseus scutes: one dorsal, two lateral, and two ventral. The head is continued anteriorly into an elongated snout. The mouth is inferior and there are no teeth. In front and well forward from the mouth, transversely, are four barbels or feelers. The nostrils are double, and near the anterior border of the orbit. The eyes are of moderate size, inclined to small. The body more or less tapers towards the tail. The ventral fins, as in all ganoids are abdominal. The dorsal is placed very far back. The caudal is heterocercal, and along the upper edge of the tail is a long fulcrum. The flesh of the sturgeons is esteemed; caviare is made from the ovaries and roe, and isinglass, a kind of glue, from the air-bladders.

The genus *Polypterus* has one species (*P. bichir*) of tropical Africa, and *Calamoichthys* has also one species (*C. calabaricus*) of old Calabar. This fish is related to *P. bichir*, but is dwarfed and more elongated, and said to be without ventral fins—a thing unique among ganoids. *Lepidosteus* has four, perhaps five, known species, one *L. sinensis* of China, and the following confined to America, viz., the common Gar-pike (*L. osseus*), the short-nosed Gar (*L. platostomus*), the alligator Gar (*L. tristoechus*), and a variety, perhaps not to be distinguished as a species from the last mentioned (*L. tropicus*). The common Gar-pike is locally common in parts of Canada and the short-nosed Gar also occurs. The Gar-pikes are cylindrical in shape. Unlike the sturgeons and paddle-fish they are covered with ganoid or lozenge-shaped scales. The mouth is prolonged into a sort of beak, which bears both conical and rasp-like teeth—the former in a single row along the edges of the jaws—the latter in a series behind these. The beak, or snout, composes the jaws, and is formed of a modification of the maxillaries and præmaxillaries above, and of the dentaries and articularies below. The skeleton is ossified. *Amia* has one species: the dog-fish or bow-fin (*A. calva*) of Canada and the United States. It also is locally common in parts of the Dominion, and I have found it along with the Gar-pike, in great plenty in the Bay of Quinté. Like the Gar-fishes the dog-fish has the skeleton ossified. Its body is covered with cycloid scales, and it possesses a gular-plate between the rami of the mandible instead of the usual urohyal.

Thus out of twelve known world wide genera of Ganoids, four, viz., *Polyodon*, *Acipenser*, *Lepidosteus* and *Amia*, are found in Canada, and as said above *Scaphirynchus* may yet be recorded.

Paddle-fish (*Polyodon spathula*, Walbaum). Mounted. Specimen from Lake Huron, near Sarnia, Ont. Valuable because it is one of only a few specimens of this species which have been found in Canadian waters in recent years. (See above.)

Common Sturgeon (*Acipenser sturio*, L.). In formalin. Specimen from Lake Deschene.

Rock Sturgeon (*Acipenser rubicundus*, Le Sueur). In formalin. Specimens from Detroit river, St. Lawrence river, Lancaster, Ont., and a specimen which lived for ten or twelve years in the aquarium of the Ottawa Fish Hatchery. Mounted. Specimens from Lake Erie and River St. Lawrence.

Common Gar-pike (*Lepidosteus osseus*, L.) In formalin. Specimens from Belleville, Bay of Quinté; and Ottawa river. Mounted. Specimens from Lake Deschene, Lake Ontario, and Gatineau river, P.Q.

Dog-fish or Bowfin (*Amia calva*, L.). In formalin. Specimens from Belleville, Bay of Quinté; and Ottawa river. Mounted. Specimens from Lake Ontario.

Mud-fish (*Protopterus annectens*). Exotic. A fish of tropical Africa. Specimen in formalin, and its capsule of mud.

SUB-CLASS: *Teleostei* (Teleosts).

The Teleosts embrace the vast majority of fishes, there being between twelve and thirteen thousand known species. The skeleton is essentially ossified, but there are

sometimes cartilaginous elements. The gills are generally in folds, and protected by an opercular covering. The optic nerves decussate or cross each other. Most are oviparous, but there are ovo-viviparous teleosts. Their value to man is incalculable: 'the harvest of the sea' yielding herrings, mackerels, codfishes, salmonoids and many others, which fishermen jeopardise their lives in procuring; whilst the angler beguiles his leisure hours beside some stream or lake, tempting a silvery trout or gamey bass with baited hook.

The structure of the teleost cranium has long engaged the attention of ichthyologists, and a knowledge of its constituent parts is of great value in the general study of osteology. A short outline of its main features, therefore, is given here. 'In the analysis of the fish's skull,' said Owen, 'it is best to begin at the back part,'¹ and in my own studies I have found this method to be the most convenient. At the base of the skull is the *basioccipital*. It has a concavity (filled in conjunction with that of the first vertebra to which it attaches, with a gelatinous substance) and supports a pair of bones, one on either side, called the *exoccipitals*, resting upon which is another pair called the *paroccipitals*, and crowning the whole is a bone, often crested, called the *supraoccipital*. Five of these bones, viz.: the *exoccipitals*, the *paroccipitals*, and the *supraoccipital*, form an arch, which rests upon the *basioccipital*, and the aperture, thus formed, through which the nerve mass passes to the brain is known as the *foramen magnum*. In some teleosts, e.g., the cod-fish, connected with the *exoccipital* is a partially ossified or gristly ear-capsule, called the *petrosal* (= the *squamosal*) in which is lodged an *otolith*. The floor of the cranium consists of the *basioccipital* and two other bones called the *basisphenoid* and the *vomer*. The *basisphenoid* is a long and narrow bone, into which the *basioccipital* posteriorly, and the *vomer* anteriorly are wedged. Upon it are supported a pair of bones called the *alisphenoids*, on which are the *mastoids*, over and above which, in turn, are the *parietals*. In front of these are a pair of small plates: the *orbitosphenoids*, adjoining which are the *post-frontals*, and placed on the roof of the cranium a pair of bones called the *frontals*. At the front part of the skull is the *vomer* over which are the *prefrontals*, and over and above these are the *nasals*. Situated also at the front part of the skull is a pair of bones called the *turbinals*. In front of the cranium are two pairs of bones, one the *maxillaries*, the other the *premaxillaries*, which often bear teeth, and which help to form the upper jaw. The gills, on either side, are covered and protected by the opercular flap, which consists of the *operculum*, a scale like, triangular shaped bone; which is joined to the *præoperculum* and *hyomandibular*; the *suboperculum*, an oblong bone placed below the *operculum*; the *interoperculum*, often an oval shaped bone, placed below the *præoperculum*, and attached by ligament to the mandible; and the *præoperculum*, a strong, curved, angular bone, anterior to the other pieces, which not only serves as a support to the flap, but forms a part of the mandibular arch. This bone is often serrated along the edge of its posterior margin. Besides the *præoperculum*, the bones of the mandibular arch or suspensorium, consist of the *hyomandibular* (= the *epitympanic* or *temporal*), which articulates with the postfrontal and mastoid bones of the cranium, and with the *operculum*; the *metapterygoid* (= the *pretympanic*) a flat shaped bone; the *mesotympanic* (= the *symplectic*) a narrow styliform bone, placed behind the *metapterygoid*, and between the *hyomandibular* and *quadrate*; and the *quadrate* (= the *hypotympanic*) a triangular bone, with a condyle to which the mandible is attached. The bones of the mandibular arch, then, form a chain connecting the mandible with the cranium. Bridging the space between this arch and the prefrontal and vomer, are the following bones: the *entopterygoid* (= the *mesopterygoid*) a thin and, sometimes, semi-transparent bone, which is joined to the *pterygoid* and *palatine*, and which, moreover, forms a floor of the orbit; the *pterygoid*, a long and slender sickle shaped bone, joined to the anterior part of the *quadrate*, and reaching the *palatine*; and the *palatine*, also often beset with teeth, and which adjoins the prefrontal and vomer. These bones are known as the

¹ Owen: *Ibid.* p. 94.

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palatine-arch. A chain of bones called the *infraorbital ring* is arranged around the lower border of the orbit, the first of which is large, and bears the name of the præ-orbital, and the others, a few in number, are called the *sub-orbitals*. The bones of the mandible, or those of the lower jaw, consist on either side of the *dentary*, a strong and as the name implies, a tooth bearing bone, deeply hollowed out for the reception of the triangular process of the articular; the *articulary*, which is connected by ligament to the maxillary, and which articulates by a concavity with the quadrate; and the *angular*, a small superficial bone. The dentaries are united by symphysis. Within the excavation of the dentary is an unossified cylindrical process known as *meckle's cartilage*. There remain to be mentioned, in connection with the bones of the head those of the hyoid and branchial arches. Attached to the hyomandibular is the *stylohyal*, from which the other bones of the hyoid arch, called the *epihyal*, the *ceratohyal* and the *basihyal* are suspended: the last-mentioned is formed of two pieces. To the epihyal and ceratohyal are attached the *branchiostegals*. The basihyal gives support to a bone called the *glossohyal* (which enters the tongue), as well as to a vertical, compressed bone called the *urohyal*. This last is also connected by ligament to the anterior part of the pectoral-arch. A medium chain of bones (few in number) called the *basibranchials* support on either side the bones of the branchial arch, which are distinguished as the *hypobranchial*, the *ceratobranchial*, the *epibranchial*, and the *upper* and *lower pharyngeal*. The foregoing is characteristic of the teleost cranium and its appendages, but there are manifold modifications.

The Teleosts are divisible into many orders. Remarks on such as are represented in the museum are given in this report.

ORDER: Nematognathi.

This extensive order embraces the Siluroids or Cat-fishes, the majority of which live in fresh-water, but some are marine. They have the first few anterior vertebræ coalesced, forming a single bone; there is no sub-operculum; and the maxillaries are rudimentary, and are the bases, as a rule, of a pair of long barbels. The dorsal and pectoral fins are usually armed with strong spines. There are no scales, but in some the skin is covered with bony scutes. The Siluroids are best represented in South America, but North America has a great number. Canada has a limited number, all of which have an adipose fin. Europe has a single species: the Wels (*Silurus glanis*). The Electric Cat-fishes (*Malapterurus*) of Africa have an electric organ, by which they have the power to give electric shocks. Many, if not all, of the Siluroids take care of their young, and 'the male of some species of Arius carries the ova about with him in his capacious pharynx.'¹

FAMILY: *Siluridæ* (Cat-fishes).

Horned Pout or Common Bull-head (*Ameiurus nebulosus*, Le Sueur). In formalin. Specimens from Healy's Falls, Northumberland county, Ont.; Rideau canal, Ont.; Lake Ontario; and Gilmour's Mills, P.Q., near Ottawa.

Stone Cat (*Noturus flavus*, Rafinesque). In formalin. Specimen from Detroit river, near Sandwich, Ont.

ORDER: *Plectospondyli*.

This the most extensive order of fresh-water fishes, embraces the Cyprinoids; which, like those of the preceding, have the four anterior vertebræ coalesced. The skin, with exception of a few scaleless forms, is covered with cycloid scales, and the

¹ Dr. Günther: Ibid, p. 163.

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fins have soft rays only. The order is divisible into a number of families; two of which *Catostomidæ* (Suckers) and *Cyprinidæ* (Carps and Minnows) occur in Canada. The former has numerous; the latter few pharyngeal teeth, but there are other distinctive characters.

FAMILY: *Catostomidæ* (Suckers).

Buffalo Fish (*Ictiobus bubalus*, Rafinesque). Mounted. Specimen from Lake Winnipeg.

Lake Carp (*Carpiodes thompsoni*, Le Sueur) ?. Mounted. Specimen from Lake Erie.

White Sucker (*Catostomus commersonnii*, Lacépède). In formalin. Specimens from Healy's Falls, Northumberland County, Ont.; and from vicinity of Ottawa. Mounted. Specimens from Lake Winnipeg.

Common Red-horse (*Moxostoma aureolum*, Le Sueur). In formalin. Specimens from Detroit river, near Sandwich, Ont. Mounted. Specimens from Lake Ontario.

FAMILY: *Cyprinidæ* (Carps and Minnows).

Carp (*Cyprinus carpio*, L.). An introduced species from Europe—a very inadvisable introduction. Mr. Hurley, fishery officer, says it is infesting the Bay of Quinté in thousands. In formalin. Specimen from Bay of Quinté.

Red-bellied Dace (*Chrosomus erythrogaster*, Rafinesque). In formalin. Specimens from Clear Lake, Lepreaux, Charlotte County, N.B.

Minnow (*Leuciscus neogæus*, Cope). In formalin. Specimens from St. John county, N.B.

Spawn Eater (*Notropis hudsonius*, De Witt Clinton). In formalin. Specimens from near Belleville, Ont.

Minnow (*Couesius plumbeus*, Agassiz). In formalin. Specimens from St. John County, N.B.

ORDER: *Apodes*.

This order embraces the Eels: elongated teleosts of serpent-form or cylindrical shape. They are devoid of premaxillaries, have no ventral fins, and the vertical fin, when present, is continuous. The order is divisible into various families, some of which, such as *Anquillidæ*, have rudimentary scales embedded in the skin; whilst others are scaleless. The eels of the family *Muranidæ* have neither pectoral nor ventral fins.

FAMILY: *Anquillidæ* (True Eels).

American Eel (*Anguilla chrysypa*, Rafinesque). In formalin. Specimens from vicinity of Ottawa and Lake Ontario. Mounted. Specimens from St. Lawrence river, Richelieu river, and Lake Ontario.

ORDER: *Isospondyli*.

This order is one of the most important to man. It includes the Clupeoids and Salmonoids: fishes of wide distribution. Many are marine, some of which are anadromous or live in the sea, but ascend rivers to spawn; whilst many again are confined to fresh water. They are soft-rayed fishes, and as a rule the scales are cycloid. The Clupeoids embrace the herrings and their allies, some of which, such as the true herrings (*Clupea*) have no lateral line, and they differ markedly from the Salmonoids in the absence of an adipose fin. The Salmonoids are recent teleosts, and 'seem to

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have put in their appearance in Post-pliocene times.'¹ 'The instability of the specific forms and the lack of sharply defined specific characters, may be in part attributed to their recent origin, as Dr. Günther has suggested.'²

FAMILY: *Hiodontidæ* (Moon-eyes).

Moon-eye or Toothed Herring (*Hiodon tergisus*, Le Sueur). In formalin. Specimens from Detroit river, near Sandwich, Ont.

FAMILY: *Clupeidæ* (Herrings).

Common Herring (*Clupea harengus*, L.). In formalin. Specimens from Digby, N.S.; and Atlantic coast of Canada.

Gaspereau or Alewife (*Pomolobus pseudoharengus*, Wilson). In formalin. Specimens from Gulf of St. Lawrence.

American Shad (*Alosa sapidissima*, Wilson). In formalin and mounted. Specimens from Gulf of St. Lawrence.

FAMILY: *Salmonidæ* (Salmon and their allies).

Common White-fish (*Coregonus clupeiformis*, Mitchill). In formalin. Specimens from Detroit river, near Sandwich, Ont. Mounted. Specimens from Lake Ontario, Lake Erie, Lake Simcoe, Lake Superior and Lake Winnipeg.

Cisco or Lake Herring (*Argyrosomus artedii*, Le Sueur). In formalin. Specimens from Detroit river, near Sandwich, Ont.

Tullibee (*Argyrosomus tullibeei*, Richardson). Mounted. Specimens from Northwest Territories.

Dog Salmon (*Onchorynchus keta*, Walbaum). Mounted. Specimen from British Columbia.

Quinnat (*Onchorynchus quinnat*,³ Günther). Mounted. Specimens from British Columbia.

Atlantic Salmon (*Salmo salar*, L.). In formalin. Specimens from Restigouche river; Tadousac, P.Q., and Manitoulin island. Mounted. Specimens from Restigouche river; Halifax N.S.; and Lake Ontario.

Ouananiche (*Salmo salar ouananiche*, McCarthy). In formalin. Specimens from Lake St. John, P.Q.

Steel-head (*Salmo gairdneri*, Richardson). In formalin. Specimen from Fraser river, B.C. Mounted. Specimen from British Columbia.

Rainbow Trout (*Salmo irideus*, Gibbons). In formalin. Specimen from Bedford, N.S. (Imported from the Pacific slope). Mounted. Specimen from British Columbia.

Great Lake Trout (*Cristivomer namaycush*, Walbaum). 'The Salmon Trout is an inhabitant of the Great Lake region, and other bodies of fresh water. Its colour is gray, with spots of a lighter gray, the dorsal and caudal fins being marked with spots of a darker hue. It is, however, subject to great variation, and although all the varieties bear the specific name of *namaycush*, there is considerable reason for the popular distinctions such as gray-trout, salmon-trout, Great Lake-trout, and Mackinaw-trout. But structurally it has not appeared to ichthyologists that there are sufficient distinctions to warrant the separation of varieties into different species. As to size, individuals of three feet or more long are recorded, but such fish are very

¹ Günther. Ibid, p. 201.

² Drs. Jordan and Evermann: 'Fishes of North and Middle America,' Vol. I., p. 469.

³ At the risk of tampering with rules of priority, I presume to call this fish, after Dr. Günther, *O. quinnat*, instead of using the ungainly appellation of *O. tschawytscha*.

exceptional, and one of about two feet or less is a large specimen. The salmon trout prefers the deeper parts of the lake: approaching the shoals, in the fall of the year, for the purpose of spawning. It is carnivorous, preying largely upon other fishes.¹ In formalin. Specimens from Rock lake, Haliburton county, Ont. (result of the planting of the fish fry); Smoke lake and Cranberry lake, Algonquin park, Ont.; Lake Huron; and Rideau lake, Ont. Mounted. Specimens from Lake Ontario; province of Quebec; Manitoba; Georgian bay; Lake Memphremagog; and Lake Metapedia.

Speckled or Brook Trout (*Salvelinus fontinalis*, Mitchell). 'The Muskoka river is frequented by the Speckled or Brook Trout, which species of fish differs markedly from the salmon trout in the absence of a toothed crest, or bony projection, on the vomer; and in the lack of a band of teeth on the hyoid bone; each of which characters is possessed by the latter. The speckled trout manifests great variability of size and colour, purely regulated, it would seem, by environment, for it inhabits streams, lakes and even the sea.'² In formalin. Specimens from head of Muskoka river, Algonquin park, Ont.; Pickanoch, near Gracefield, P.Q.; Lake Pembino, Lievre river, P.Q.; Lake St. Germain, P.Q.; Gatineau district, near Ottawa; Green lake, P.Q., and St. John river, N.B. Mounted. Specimens from St. John river, N.B.; Restigouche river; Moisie river, P.Q.; Lake Superior; and Nepigon river.

FAMILY: *Argentiniidæ* (Smelts and their allies).

Capelin (*Mallotus villosus*, Müller). In formalin. Specimens from Gulf of St. Lawrence.

American Smelt or Ice-fish (*Osmerus mordax*, Mitchell). In formalin. Specimens from vicinity of Digby, N.S., and Lac des Isles, Gatineau district, P. Q. (land-locked variety). 'Whilst engaged in some fisheries matters in the month of May, 1903, I found some specimens of the American Smelt floating dead on the surface of the water of Lac des Isles, in the Gatineau district, P.Q. It is known that this species of fish exists land-locked in fresh water lakes in New Brunswick, Nova Scotia, and in the state of Maine, but its occurrence in a lake so far away from the sea as Lac des Isles, is perhaps worthy of mention. The specimens are dwarfed and perhaps may be regarded as a sub-species: otherwise the external characters appear to agree with the ordinary form of *Osmerus mordax*.'³

ORDER: *Haplomi*.

This order contains four families; viz.:—Umbridæ (Mud Minnows), Luciidæ (Pikes), Poeciliidæ (Killi-fishes), and Amblyopsidæ (Blind-fishes). These families, save the third, have a very limited number of species. Those of the family Luciidæ are large or medium sized; otherwise the rest are mostly very small fishes. In fact, to this order, perhaps, the smallest of all fishes belong: the male of *Heterandria formosa* measures only three-fourths of an inch, and some of the males of *Gambusia affinis* only half an inch in length. Of the Pikes there are some six determined species, confined to the fresh waters of North America, except the Common Pike (*Lucius lucius*⁴) which also belongs to Europe and Asia. The largest species, and the largest fish of the order, is the well known Maskinonge (*Lucius maskinongy*). The Pikes are voracious but not active fishes, and lurk in the water for their prey

¹ Author: 'Observations of Animals Native in the Algonquin National Park,' 'Ottawa Naturalist,' Nov., 1902, p. 156.

² Author Ibid, p. 159.

³ Author: 'Ottawa Naturalist,' June, 1906, p. 50.

⁴ The former genus *Esox* is broken into owing to its having included fishes entirely unrelated to each other. I therefore, but reluctantly, employ the name to *Lucius* instead of *Esox* for the pikes.

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among weedy places. They have the dorsal fin placed very far back near the caudal, and opposite the anal. There are specimens of three of the species in the museum, and as I am frequently asked the question: 'how are they to be distinguished?' the following distinctive character may be pointed out.

Green Pike (*L. reticulatus*)—cheeks and opercles completely covered with scales.

Common Pike (*L. lucius*)—cheeks completely: upper parts of opercles only covered with scales.

Maskinonge (*L. maskinongy*)—upper parts of cheeks and opercles only covered with scales.

The Killi-fishes number many species, mostly very small; few exceeding six inches in length. The sexes are often unlike, and many are ovo-viviparous. The fishes of this order often have the head as well as the body covered with cycloid scales.

FAMILY: *Luciidae* (Pikes).

Green Pike (*Lucius reticulatus*, Le Sueur). In formalin. Specimen from Brome lake, P.Q.

Common Pike (*Lucius lucius*, L.). In formalin. Specimens from Sharbot lake, Ont.; Detroit river, near Sandwich, Ont.; Gilmour's mills, Ottawa river, P.Q.; and Lac des Isles, Gatineau district, P.Q. Mounted. Specimens from Lake Ontario, and Northwest Territories.

Maskinonge (*Lucius maskinongy*, Mitchill). Mounted. Specimen from Lake Deschene, near Britannia, Ont.

FAMILY: *Poeciliidae* (Killi-fishes).

Common Killi-fish (*Fundulus heteroclitus*, L.). In formalin. Specimens from Bay of Fundy, N.B.

Killi-fish (*Fundulus diaphanus*, Le Sueur). In formalin. Specimens from St. John river, N.B.

ORDER: *Synentognathi*.

This order embraces a few families which agree in having the lower pharyngeal bones united, and the 'scapula suspended to the cranium by a post-temporal bone, which is slender and furcate.'¹ The scales are often deciduous. The family Scombrsoidae is represented in the museum by a specimen of the Saury (*Scombrosox saurus*). The Sauries are elongated fishes with prolonged jaws, somewhat like those of the Gar-pike, but the lower jaw is longer than the upper. Between the dorsal and caudal and the anal and caudal fins are a series of finlets, as in mackerels.

FAMILY: *Scombrsoidae* (Sauries).

Saury (*Scombrosox saurus*, Walbaum). In formalin. Specimen from Atlantic coast of Canada.

ORDER: *Hemibranchii*.

This very limited order embraces a few families, which are chiefly represented by Gasterosteidae (Sticklebacks) and Fistulariidae (Trumpet-fishes). There are specimens of several species of the former in the museum collection. The Sticklebacks are scaleless, and the skin is either naked or covered on the sides with bony scutes. Owing to 'the prolongation of the pubic bones which are attached to the humeral arch,'² the

¹ Drs. Jordan and Evermann: Ibid, Vol. I., p. 707.

² Dr. Günther: Ibid, p. 504.

ventral fins, which are modified as spines, have a sub-abdominal position. Preceding the dorsal fin are few or many dorsal spines, and the anal fin is preceded by a spine. The Sticklebacks are pugnacious little fishes, and often construct nests in which the eggs are hatched.

FAMILY: *Gasterosteidae* (Sticklebacks).

Brook Stickleback (*Eucalia inconstans*, Kirtland). In formalin. Specimen from Stittsville, Ont.

Nine-spined Stickleback (*Pygosteus fungitius*, L.). In formalin. Specimen from Lac des Isles, Gatineau district, P.Q. Specimens from Fullerton, collected during expedition of ss. *Neptune*, 1903-4.

Common Eastern Stickleback (*Gasterosteus bispinosus*, Walbaum). In formalin. Specimen from estuary, Magaguadavic river, St. George, N.B.

Stickleback (*Apeltes quadracus*, Mitchill). In formalin. Specimens from Quaco, St. John county, N.B.

ORDER: *Lophobranchii*.

This order receives its name from the character of the gills which are tufted, instead of laminated, or in folds, as they are in the great majority of fishes. There is one North American family: Syngnathidae, which embraces the Pipe-fishes and Sea-horses. The Pipe-fishes are very elongated and slender in form. They have no scales, but are covered with bony plates forming a dermal skeleton. The snout is prolonged into a tube. The males have a ventral-pouch in which the eggs are contained until hatched. The Sea-horses share some of the characters of the Pipe-fishes, but have a head resembling that of a horse, an occipital crest, a curved neck, and a prehensile tail by which they attach themselves to marine objects such as sea-weeds.

FAMILY: *Syngnathidae* (Pipe-fishes and Sea-horses).

Great Pipe-fish (*Siphostoma californiense*, Storer). In formalin. Male and female specimens from coast of British Columbia.

Sea-horse (*Hippocampus hudsonius*, De Kay). Dried specimen from Atlantic coast of Canada.

ORDER: *Acanthopteri*.

This vast order embraces the great majority of extant fishes. Provisionally it has been divided into many sub-orders and groups, some of which are well defined, but 'until the anatomy or at least the osteology of every family and sub-family is known, much doubt must remain as to the proper allocation of such group.'¹ (Gill). As a rule, allowing for modifications, the ventral fins are thoracic, or sometimes jugular; some of the fins have strong spines in addition to soft rays; and the scales are ctenoid, or cycloid, or sometimes awanting.

Salmoperca: This small sub-order contains only two known species referable to two genera: *Percopsis* and *Columbia*. The remarkable fish known as the Sand Roller or Trout Perch (*Percopsis guttatus*) 'combines with ordinary Salmonoid characters the structure of the head and mouth of a Percoid.'² It has, locally, rather a wide distribution. Its only known ally: *Columbia transmontana* is a fish of the Columbia river basin. Both species have ctenoid scales, the central fins abdominal, and an adipose fin.

¹ Drs. Jordan and Evermann: Ibid, Vol. I., p. 780.

² Drs. Jordan and Evermann: Ibid, Vol. I., p. 784.

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FAMILY: *Percopsidæ* (Trout Perches).

Sand Roller or Trout Perch (*Percopsis guttatus*, Agassiz). In formalin. Specimens from Tweed and Belleville, Moira river, Ont.

Percesoces. This sub-order embraces a few families represented in North America by: *Atherinidæ* (Silversides), *Mugilidæ* (Mulletts), and *Sphyranidæ* (Barracudas). The scales are cycloid, and the ventral fins abdominal, each with a spine. The Silversides have a silvery band along each side, but no lateral line. They have two dorsal fins, the first of which has flexible spines, and the second soft rays.

FAMILY: *Atherinidæ* (Silversides).

Silverside (*Menidia notata*, Mitchill). In formalin. Specimens from Atlantic coast of Canada.

Ammodytoidea. This small group embraces the Sand-launces (*Ammodytes*). These elongated fishes have minute cycloid scales, no ventral fins, no spines on any of the fins, the single dorsal and anal very long and low, and the lateral lines are dorsally situated.

FAMILY: *Ammodytiidæ* (Sand Launces).

Sand Launce (*Ammodytes americanus*, De Kay). In formalin. Specimens from Gulf of St. Lawrence.

Scombroidei. We now reach a group of great importance to man; the well known Mackerels belonging here. There is a great diversity of form in the Scombroids, and great extremes of size, and they embrace many very distinct families. The specimens in the collection of the museum belong to the families: *Scombridæ*, *Xiphiidæ*, and *Stromateidæ*. *Scombridæ* embraces the Mackerels. They have the ventral fins thoracic, the scales cycloid and minute, the first dorsal with feeble spines, and finlets between the dorsal and caudal, and between the anal and caudal. Of *Xiphiidæ* there is only one species the Sword-fish (*Xiphius gladius*) which has no ventral fins and no scales in the adult. It is one of the largest of fishes. Its so called sword is a prolongation of the upper jaw: 'forming a sword which is flattened horizontally and composed of the consolidated vomer, ethmoid, and premaxillaries.'¹ *Stromateidæ* embraces the Flatolas, represented in the museum by the Dollar-fish (*Poronotus triacanthus*). These are compressed in form, the ventral fins are rudimentary or wanting, and the scales small and cycloid. In general the Scombroid fishes are so constructed as to enable them to move very rapidly through the water. The presence or non-presence of an air bladder even in closely related members of this group is in keeping with their varied characters: *Scomber scombrus* has no air bladder, whilst *S. colias* has.

FAMILY: *Scombridæ* (Mackerels).

Common Mackerel (*Scomber scombrus*, L.). In formalin. Specimens from Gulf of St. Lawrence, and Prince Edward Island.

Oceanic Bonito (*Gymnosarda pelamis*, L.). In formalin. Specimen from Atlantic coast of Canada.

Tunny (*Thynnus thynnus*, L.). Mounted. Specimen from Saguenay district. Weight, some 400 lbs.

FAMILY: *Xiphiidæ* (Sword-fishes).

Sword-fish (*Xiphius gladius*, L.). Two swords from Atlantic coast of Canada.

¹ Jordan and Evermann: Ibid, vol. I., p. 893.

FAMILY: *Stromateidæ* (Fiatolas).

Dollar-fish (*Poronotus triacanthus*, Peck). In formalin. Specimens from Atlantic coast of Canada.

Percoidæ. This is another very extensive group, embracing many families of typical Acanthopterygians. The ventral fins are thoracic, usually with five branched rays, and supported with a spine, the first dorsal and the anal with strong spines, and the scales ctenoid; but there are exceptions to some of these characters. The families represented in the museum are Centrarchidæ (Sun-fishes and Black Bass), Percidæ (Perches and their allies), and Serranidæ (Sea Bass). The last mentioned is very rich in number of species, which are cosmopolitan in their distribution, and well represented in North America. The Sun-fishes are very beautifully coloured. The Black Bass, of which there are two species: the Small-mouthed (*Micropterus dolomieu*) and the Large-mouthed (*M. salmoides*) are great favourites with anglers, especially the former. The Sea Bass are mostly marine, hence the name, but there are fresh water kinds. Some are of great size, being six feet or more in length.

FAMILY: *Centrarchidæ* (Sun-fishes).

Calico or Grass Bass (*Pomoxis sparoides*, Lacépède). In formalin. Specimens from Rideau canal, near Ottawa; Lewis' dam, vicinity of Ottawa; Gilmour's mills, P.Q., near Ottawa; and Rideau river, Ont. Mounted. Specimen from Lake Ontario.

Rock Bass (*Ambloplites rupestris*, Rafinesque). In formalin. Specimens from Detroit river, near Sandwich, Ont.; Bay of Quinté, Ont.; Sharbot lake, Ont.; from near Hog's Back, vicinity of Ottawa; Port Dover creek, Lake Erie, and Kingston Mills, Ont. Mounted. Specimens from Lake Ontario, and province of Quebec.

Blue Sun-fish (*Lepomis pallidus*, Mitchill). In formalin. Specimens from Kingston Mills, Ont.

Common Sun-fish (*Eupomotis gibbosus*, L.). In formalin. Specimens from Kingston Mills, Ont. Mounted. Specimens from Bay of Quinte.

Small-mouthed Black Bass (*Micropterus dolimieu* Lacépède). In formalin. Specimens from Rideau lake, Ont.; Christy's lake, near Perth, Ont.; Belleville, Ont.; Detroit river, near Sandwich, Ont.; Sharbot lake, Ont.; and Lac des Isles, Gatineau district, P.Q. Mounted. Specimens from Bay of Quinte, Ont.

Large-mouthed Black Bass (*Micropterus salmoides*, Lacépède). In formalin. Specimens from Lake Scugog, and Healy's falls, Northumberland county, Ont.

FAMILY: *Percidæ* (Perches and their allies).

Pike-perch, or Dore (*Stizostedion vitreum*, Mitchill). In formalin. Specimens from Detroit river, near Sandwich, Ont. Mounted. Specimens from Rideau lake, Ottawa river, Lake Erie, and Bay of Quinte.

Sauger (*Stizostedion canadense*, Smith). In formalin. Specimen from Gilmour's Mills, P.Q., near Ottawa.

Yellow Perch (*Perca flavescens*, Mitchell). In formalin. Specimens from Ottawa river; Detroit river, near Sandwich, Ont.; from mouth of stream leading out of Porcupine lake into Ragged lake, Algonquin National Park, Ont.; Port Dover, Ont.; Healy's falls, Northumberland county, Ont.; Lac des Isles, Gatineau district, P.Q., and Port Dover creek, Lake Erie.

FAMILY: *Serranidæ* (Sea Bass).

White Bass (*Roccus chrysops*, Rafinesque). Mounted. Specimen from Lake Erie.

Striped Bass (*Roccus lineatus*, Bloch). In formalin and mounted. Specimens from Miramichi river.

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White Perch (*Morone americana*, Gmelin). In formalin. Specimens from Atlantic coast of Canada.

A series of fishes known as Croakers, which are embraced in the family Sciaenidæ, follow the Percoidea. This family is represented in the museum by the Sheepshead or Fresh-water Drum (*Aplodinotus grunniens*), a fish which agrees with those of the following sub-order in having the lower pharyngeal bones united together. It has large otoliths, and gives forth a drum-like sound, readily heard above water. 'M. Dufossé has investigated very thoroughly the physiological causes of these sounds, which appear to depend largely upon the action of the air bladder.'¹

FAMILY: *Sciaenidæ* (Croakers).

Sheepshead of Fresh-water Drum (*Aplodinotus grunniens*, Rafinesque). Mounted. Specimen without locality given.

Pharyngognathi. This sub-order containing two North American families: Labridæ (Wrasses) and Sparidæ (Parrot Fishes) has the lower pharyngeals united into a single bone. The scales are cycloid, or in some weakly ctenoid. It is represented in the museum by specimens of the Cunner (*Tautogolabrus adspersus*).

FAMILY: *Labridæ* (Wrasses).

Cunner (*Tautogolabrus adspersus*, Walbaum). In formalin. Specimens from Gulf of St. Lawrence. Two dried specimens from Drummond's Dump, near Pictou, N.S.

Loricati=*Cataphracti*. This sub-order 'is distinguished by a single peculiar character, the extension of the third suborbital bone across the cheek to or toward the preopercle.'² It embraces a number of very varied families, some of which are represented in the museum.

FAMILY: *Scorpenidæ* (Rock Fishes).

Snapper (*Sebastes marinus*, L.). Mounted. Specimen from Atlantic coast of Canada.

Black-banded Rock-fish (*Sebastes nigrocinctus*, Ayres). In formalin. Specimen from British Columbia.

FAMILY: *Hexagrammidæ* (Greenlings).

Rock-trout of Green-cod (*Hexagrammus decagrammus*, Pallas). Mounted. Specimen from Esquimalt Harbour, B.C.

Cultus Cod (*Ophiodon elongatus*, Girard). In formalin and mounted. Specimens from Victoria, Vancouver Island.

FAMILY: *Cottidæ* (Sculpins).

Grubby (*Acanthocottus æneus*, Mitchill). In formalin. Specimen from Atlantic coast of Canada.

Common Sculpin (*Acanthocottus octodecimspinosus*, Mitchill). In formalin. Specimen from Gulf of St. Lawrence.

¹ G. Brown Goode: American Fishes, p. 137.

² Drs. Jordan and Evermann: Ibid, vol. II., p. 1756.

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Three-lobed Blepsias (*Blepsias cirrhosus*, Pallas). In formalin. Specimen from coast of British Columbia.

Sea Raven (*Hemitripterus americanus*, Gmelin). In formalin. Specimens from Atlantic coast of Canada.

FAMILY: *Agonidæ* (Sea Poachers).

Alligator Fish (*Aspidophoroides monoptygius*, Block). In formalin. Specimen from Ungava bay. Two dried specimens from Gulf of St. Lawrence.

FAMILY: *Cyclopteridæ* (Lump Fishes).

Lump Fish (*Cyclopterus lumpus*, L.). In formalin. Specimen taken in salmon weirs, St. John harbour, N.B.

FAMILY: *Liparididæ* (Sea Snails).

Sea Snail (*Neoliparis atlanticus*, Jordan and Evermann)? In formalin. Specimen from Atlantic coast of Canada.

Discocephali. This sub-order contains one family: Echeneididæ (the singular Remoras). On the top of the head is a suction disk, said to be a modification of the spinous dorsal fin by which they attach themselves to sharks, vessels, or other floating objects, and so are conveyed from one place to another.

FAMILY: *Echeneididæ* (Remoras).

Remora or Sucking Fish (*Remora remora*, L.). In formalin. Specimen from Atlantic coast of Canada.

Blenniodea. This is an extensive group, embraced in a few families of which Blenniidæ (Blennies and their allies), Cryptacanthodidæ (Wry-mouths), and Anarhichadidæ (Wolf-fishes) may be mentioned.

FAMILY: *Cryptacanthodidæ* (Wry-mouths).

Ghost Fish (*Cryptacanthodes maculatus*, Storer). In formalin. Specimen from Atlantic coast of Canada, and specimen from salmon weirs, St. John harbour, N.B.

FAMILY: *Anarhichadidæ* (Wolf Fishes).

Wolf Fish (*Anarhichas lupus*, L.). In formalin and mounted. Specimens from Gulf of St. Lawrence.

Ophidiodea. This is another extensive group, intermediate between the preceding, and the following sub-order. It embraces elongated and compressed fishes, with the ventral fins jugular or awanting.

FAMILY: *Zoarcidæ* (Eel-pouts).

Thick-lipped Eel-pout (*Zoarces anguillaris*, Peck). In formalin. Specimen from Gulf of St. Lawrence. Two dried specimens from Gaspé bay, P.Q., and off Paspebiac, Bay Chaleur.

Vahl's Lycodes (*Lycodes vahli*, Reinhardt)? In formalin. Specimen from Ungava bay.

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Anacanthini. This sub-order is of great importance to man. It embraces three families, viz.:—*Merlucciidae* (Hakes), *Gadidae* (Cod-fishes and their allies), and *Macrouridae* (Grenadiers). The ventral fins are jugular, the scales cycloid, sometimes small and deciduous, and the vertical fins very varied; in some, e.g., the cod-fish, comprising three dorsals, two anals, and the caudal.

FAMILY: *Merlucciidae* (Hakes).

Hake (*Merluccius bilinearis*, Mitchill). In formalin. Specimen from vicinity of Digby, N.S. Mounted. Specimen without locality given.

FAMILY: *Gadidae* (Cod-fishes and their allies).

Pollock or Coal-fish (*Pollachius virens*, L.). In formalin. Specimens from vicinity of Digby, N.S.

Tom-cod (*Microgadus tomcod*, Walbaum). Mounted. Specimen from Halifax, N.S.

Common Cod-fish (*Gadus callarius*, L.). In formalin. Specimens from Gulf of St. Lawrence and Digby, N.S. Mounted. Specimens from Gulf of St. Lawrence, and Halifax, N.S.

Haddock (*Melanogrammus æglifinus*, L.). In formalin. Specimen from Gulf of St. Lawrence. Mounted. Specimen from Halifax, N.S.

Burbot or Ling (*Lota maculosa*, Le Sueur). 'In Ragged lake, in deep water, we found a Ling or Burbot, which species of fish is the sole fresh water representative of the *Gadidae*, or the fishes of the cod family, in our Dominion.¹ The ling is elongated in shape, having two small barbels at the nostrils, and a longer one at the edge of the lower jaw. There are two dorsal fins, the first very short and the second very long; and one anal fin which corresponds with the second dorsal in structure and plan. The caudal fin is barely attached to the second dorsal and anal, and is rounded at the extremity. The ventral fins, as in the cod and haddock, are jugular, or placed before the pectorals. The ling has scales, but they are very minute and embedded in the skin, so that casually it might be mistaken for a scaleless fish.'²

In formalin. Specimens from Ragged lake, Algonquin Park, Ont.; Swan river, near Vernon, B.C.; Rock lake, Haliburton county, Ont.; Lake des Chene, Ottawa river; and Healy's falls, Northumberland county, Ont. Mounted. Specimens from Lake Ontario, Lake Huron, and Lake Winnipeg.

Cusk (*Brosmus brosme*, Müller). In formalin and mounted. Specimens from Atlantic coast of Canada.

Heterosoma. This sub-order embraces the Flat-fishes and has close affinities to the preceding, but the form is very compressed, both eyes are on the same side of the head, and the blind side upon which the fish lies is whitish like the ventral part of most other fishes. The ventral fins are more or less thoracic, not jugular as in the preceding sub-order. The newly hatched flat-fishes are symmetrical, with an eye on either side, but very soon the head undergoes a distortion.

FAMILY: *Pleuronectidae* (Flat-fishes).

Halibut (*Hippoglossus hippoglossus*, L.). 'Found in all northern seas.'³ In formalin. Specimens from Gulf of St. Lawrence and vicinity of Digby, N.S. Mounted. Specimen from Gulf of St. Lawrence, and specimen from Victoria, B.C.

¹ The tomcod (*Microgadus*) might be considered an exception, but it is anadromous (or merely ascends rivers to spawn) its environment, ordinarily, being in salt or brackish water.

² Author: Ibid, p. 158.

³ Drs. Jordan and Evermann: Ibid, vol. III., p. 2611.

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Rough Dab (*Hippoglossoides platessoides*, Fabricius). Mounted. Specimens from Gulf of St. Lawrence.

Great Flounder (*Platichthys stellatus*, Pallas). Body covered with stellate tubercles instead of scales. In formalin. Specimens from British Columbia.

ORDER: *Plectognathi*.

The fishes of this order exhibit remarkable modifications of structure. The maxillaries and premaxillaries, and the dentaries and articularies are consolidated forming single pieces; the gill-apertures are small openings in front of the pectorals; and the vertebrae are few in number. The order is divisible into a number of sub-orders with their families, the species of which are variously protected with prickles, polygonal scutes, spinigerous scales, or a tessellated skin.

FAMILY: *Ostraciidæ* (Trunk Fishes).

Spotted Trunk Fish (*Lactophrys bicaudalis*, L.). Exotic. A fish of the West Indies. Dried specimen without locality given.

ORDER: *Pediculati*.

The fishes of this order depart from the usual piscine type by having the 'carpal bones notably elongate, forming a kind of arm (pseudobrachium) which supports the broad pectoral.'¹

FAMILY: *Lophiidæ* (Fishing Frogs).

Angler or Fishing Frog (*Lophius piscatorius*, L.). In formalin. Specimen from salmon weirs, St. John harbour, N.B. Bones from Digby, N.S.

CLASS: *Batrachia* (Batrachians).

The Batrachians are remarkable for the transformation which the most of them undergo. There is first the larval or tad-pole stage, when the breathing function, as in fishes, is carried on by gills. This stage is gradually changed, the gills eventually disappearing, and the breathing function afterwards is performed by lungs. In some, however, the gills are retained throughout life—the Menobranchus (*Necturus maculatus*) for instance—and lungs are never acquired by such. Again, there are certain ovo-viviparous Batrachians, the larval stage of which is undergone during the existence of the embryo in the oviduct.² In this class the five digital limb is first met with. Batrachians are confined to tropical and temperate latitudes, and are divisible into the following three orders:

Apoda (Coecilians, or Limbless Batrachians).

Caudata (Salamanders and their allies, or Tailed Batrachians).

Ecaudata (Frogs and Toads, or Tailless Batrachians).

The following mentioned specimens of Batrachians are preserved in formalin. Specimens of the Leopard Frog (*Rana virescens*), of the Wood Frog (*Rana sylvatica*), of the Green Frog (*Rana clamata*), and of the American Toad (*Bufo americanus*), from the vicinity of Ottawa; of the Bull Frog (*Rana catesbiana*), from Wakefield, P.Q.,

¹ Drs. Jordan and Evermann: *Ibid*, vol. III., p. 2712.

² The young of the Black Salamander (*S. atra*) possesses long plum-like external gills during its existence in the oviduct, shedding them before birth: Parker and Haswell: *Ibid*, p. 289.

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and Belleville, Ont.; of the Common Tree Toad (*Hyla versicolor*), from Brennan's hill, Gatineau district, P.Q.; and of Menobranchus (*Necturus maculatus*) from the Detroit and Ottawa rivers. Specimens of the last mentioned species sometimes pass through the water pipes, dead or alive, of the Ottawa fish hatchery.

CLASS: *Reptilia* (Reptiles).

Although Reptiles agree with fishes and batrachians in being what is termed 'cold-blooded,' they differ from these and agree with birds and mammals in never breathing during any period of their lives by gills, but always by lungs. They further differ from the two former and agree with the two latter in the possession during the development of the embryo of what are known as an amnion and an allantois. At the base of the skull there is a single occipital condyle (at least in all the extant orders), as in birds, with whom in many other essential particulars they closely agree. Notwithstanding the fact that there are two of the existing orders of reptiles very numerous in species (there being some sixteen hundred serpents and some nineteen hundred lizards¹), there are many orders of the class (such as the Dinosaurians and Pterodactyles) which are entirely extinct, and which, along with the predecessors of some of the surviving orders, were the dominant vertebrates during Triassic and Jurassic ages; and there can be no doubt that the modern representatives of the class (the most of them at least) are the result of extreme modifications of structure, which their ancestors gradually underwent in struggling to survive amid stupendous changes in the physical conditions of the globe. The crawling serpents, the latest to appear of the reptiles, thoroughly manifest this.

The extant Reptiles are divisible into the following five orders, viz.:

Rhynchocephalia (*Sphenodon punctata*,² the Tuatara of the Maoris: the only surviving species).

Chelonia (Turtles and Tortoises).

Crocodylia (Crocodiles and their allies).

Lacertilia (Lizards and Chameleons).

Ophidia (Serpents).

This class is represented in the museum by specimens of the Snapping Turtle (*Chelydra serpentina*), of Blanding's Tortoise (*Emys blandingii*), of the Mud Turtle (*Chrysemys picta*), a few of which are living, from various parts of Ontario; and a few serpents.

Foreign to Canada are a few specimens of the Alligator (*Alligator mississippiensis*), one of which is living.

CLASS: *Aves* (Birds).

The organisation and intelligence of birds assign them a place high in the scale of the animal kingdom, and we could hardly witness in nature any living creatures more fully endowed with variety and beauty. The splendour of their colours, the grace of the forms of most of them, the warbling notes which issue from the throats of many of them, their adaptation to thrive in all sorts of environments, the extremes of size which they exhibit, and the gifts which a few kinds possess of mimicry and even of speech, all tend to stimulate our interest in them. Yet varied and numerous in kind as birds are, they exhibit no such extremes of form as those to be found among mammals or reptiles and fishes. Among mammals we could hardly conceive any creatures outwardly more unlike than an elephant and a giraffe, a kangaroo and a chimpanzee, or a whale and a bat; but amongst birds there is no such great morphological diversity. If, for

¹ According to Dr. Boulenger there are 1,639 valid species of serpents, 1,893 of true lizards and 76 of chameleons. 'Catalogue of Snakes in the British Museum,' vol. III., p. VI.

² = *Hatteria punctata*.

instance, a humming bird were enlarged to the size of an ostrich, and the two placed side by side, the former would be seen to possess a very long bill, strongly developed wings, and feeble legs and feet; and the latter to have, comparatively, a short bill, poorly developed wings, and very powerful legs and feet; yet in such extremes of form no such departure from a general type would be manifest as that which mammals display. In other words, birds might be illustrated by a great cluster of flowers closely adjacent to each other on a bush, whilst mammals, reptiles and fishes would, respectively, according to this illustration, more resemble branches beset with flowers here and there, with occasional minor clusters only. A distinguishing thing about birds is the possession of feathers. This covering is peculiar to the class, and all birds possess them. Birds are well distinguished from reptiles to which in certain essential features, they are related, not only by this covering, but also on account of the structure of the heart which vitally affects the temperature of the blood; and the manner in which the fore pair of limbs is modified into wings. The hind pair of limbs has not departed so much from the original type as the wings have done. No bird has less than two toes on each foot,¹ and none have more than four: four indeed is the ordinary number.

The morphological similarity of the avian structure, just pointed out, is after all a mere matter of comparison; and it is indeed a long way from the ungainly penguin, with its scale-like feathers, to the tiny warbler, perched in some top-most twig of a tree in the forest; and there is hardly any kind of environment, whether water or land, marsh or rocky cliff, prairie or wooded dell, where birds are not to be found.

There are entire orders of birds, the members of which are all aquatic in their habits, and with these, in this report, we have mostly to do; yet in the vast assemblage of terrestrial orders, we occasionally meet some raptorial or insessorial bird, which whilst accepting some rocky or sylvan retreat for its resting place resorts to the lake or the stream in pursuit of its prey.

The mounted aquatic birds are mostly exhibited in a central case, and are here mentioned according to the orders to which they respectively belong.

ORDER: *Pygopodes* (Grebes, Divers, and Aawks). Specimens of the Red-necked Grebe (*Colymbus holboellii*), the Horned Grebe (*Colymbus auritus*), the Dabchick (*Podilymbus podiceps*), the Great Northern Diver (*Urinator imber*), the Red Throated Diver (*Urinator lumme*), the Puffin (*Fratercula arctica*), the Black Guillemot (*Cepphus grylle*), the Murre (*Uria troile*), the Razor-billed Auk (*Alca torda*), and the Dovekie (*Alle alle*).

ORDER: *Longipennes* (Gulls, Terns, and their allies). Specimens of the Ivory Gull (*Gavia alba*), the Great Black-backed Gull (*Larus marinus*), the American Herring Gull (*Larus argentatus smithsonianus*), Bonaparte's Gull (*Larus philadelphia*), and the Arctic Tern (*Sterna paradisæa*).

ORDER: *Steganopodes* (Toti-palmate Birds). Specimens of the Gannet (*Sula bassana*), the Common Cormorant (*Phalacrocorax carbo*), and the Double-crested Cormorant (*Phalacrocorax dilophus*).

ORDER: *Anseres* (Mergansers, Ducks, Geese, Swans, and Flamingoes).

Specimens of the American Merganser or Goosander (*Merganser americanus*), the Red-breasted Merganser (*Merganser serrator*), the Hooded Merganser (*Lophodytes cucullatus*), the Green-winged Teal (*Anas carolinensis*), the Blue-winged Teal (*Anas discors*), the Pin-tail Duck (*Dafla acuta*), the Wood-Duck (*Aix sponsa*), the Golden-eye (*Glaucionetta clangula americana*), the Buffle-head (*Charitonetta albeola*), the Long-tailed Duck (*Clangula hyemalis*), the Harlequin Duck (*Histrionicus histri-*

¹ The true ostriches (*Struthio*) alone among birds have only two toes on each foot.

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onicus), the American Eider (*Somateria dresseri*), the American Black Scoter (*Oidemia americana*), the Surf Scoter (*Oidemia perspicillata*), and the Ruddy Duck (*Erismatura rubida*).

ORDER: *Herodiones* (Hérons, Ibises, and their allies).

Specimens of the American Bittern (*Botaurus lentiginosus*), the Great Blue Heron (*Ardea herodias*), the Great White Egret (*Ardea egretta*), the Little White Egret (*Ardea candidissima*), and the Green Heron (*Ardea virescens*).

ORDER: *Alectorides*=*Paludicolæ* (Cranes, Rails, and their allies).

Specimens of the Virginia Rail (*Rallus virginianus*), the Florida Gallinule (*Gallinula galeata*), and the American Coot (*Fulica americana*).

ORDER: *Limicolæ* (Shore Birds).

Specimens of the Red Phalarope (*Crymophilus fulicarius*), the Northern Phalarope (*Phalaropus lobatus*), the American Woodcock (*Philohela minor*), the Marbled Godwit (*Limosa fedoa*), the American Black-tailed Godwit (*Limosa hæmastica*), the Yellow Shanks (*Totanus melanoleucus*), the Esquimaux Curlew (*Numenius borealis*), the Black-bellied Plover (*Charadrius squatarola*), the Golden Plover (*Charadrius dominicus*), and various Snipe and Sandpipers.

Of aquatic raptorial birds there are specimens of the Bald-headed Eagle (*Haliaëtus leucocephalus*), and the Osprey (*Pandion haliaëtus*), and there is also a specimen of the Belted Kingfisher (*Ceryle alcyon*).

Worthy of mention, and interesting as a coastwise insectorial, is a prepared skin, with the nest and a set of four eggs of the Ipswich Sparrow (*Ammodramus princeps*) from Sable island, Nova Scotia.

A series of the eggs of the Murre (*Uria troile*) mostly from the Bird Rocks off the Magdalen islands, is laid out in a flat table case, and manifests the very varied coloration of the eggs of that species of bird.

CLASS: *Mammalia* (Mammals).

The Mammals stand at the summit of the animal kingdom, and include man himself. They differ from other vertebrates in some marked particulars. Their young are nourished by their mothers with milk; there are two occipital condyles, instead of only one, as in reptiles and birds (but the batrachians agree with the mammals in having two condyles); there is a muscular diaphragm which separates the chest from the abdomen; the red corpuscles of the blood are non-nucleated; there is no quadrate, but the mandible articulates directly with the squamosals; they have usually a hairy covering; and they are all viviparous, excepting a few: the monotremes, which are oviparous. The majority are land animals, but there are many aquatic kinds. The Cetaceans (whales and their allies) and Sirenians (manatees and dugongs) live permanently in water, never coming ashore: the former in the sea, and the latter among aquatic vegetation in rivers, bays, and estuaries; whilst the seals spend the most of their time in water, where they feed, and resort to the land mostly in order to breed. Besides the seals there are many other aquatic carnivores, such as otters and minks; and many aquatic rodents, such as beavers and muskrats. There are also aquatic mammals of other orders, the remarkable Platypus or Duck-bill (*Ornithorhynchus paradoxus*) of the Australian region, for instance.

Although agreeing in essential particulars, mammals, as already pointed out, are exceedingly varied in form; also in size, and in adaptability to environment. Owing

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to this fact any endeavour to arrange the orders which the Mammalia embrace must to more or less arbitrary; but they are primarily divisible into the following three sub-classes, viz.:—

Prototheria (Monotremes: the Platypus and Echidnas of the Australian region).

Metatheria (Marsupials: examples Kangaroos, Wombats, and Opossums).

Eutheria (Placentals: embracing the great majority of extant mammals).

The collection contains specimens of the Common Porpoise (*Phocæna communis*) from the Gulf of St. Lawrence, a tusk of the Narwhal (*Monodon monoceros*) from the Hudson bay, the scapulæ of a Whitewhale or Beluga (*Delphinapterus leucas*) from near Digby, N.S., of the Harbour Seal (*Phoca vitulina*), the Ringed Seal (*Pagomys foetidus*), and the Hooded Seal (*Pagophilus grænlandicus*), from the Gulf of St. Lawrence; of the Fisher (*Mustela pennanti*) from Ontario, of the Mink (*Putorius vison*), of the Otter (*Lutra canadensis*), of the Beaver (*Castor canadensis*), and of the Musk Rat (*Fiber zibethicus*) from Ontario. A specimen of the last mentioned species approaches an albino in colour, and was obtained last spring at the Rideau river in the vicinity of Ottawa.

There are also specimens of some terrestrial mammals, chief among which, ornamenting the walls, are mounted heads of the Moose (*Alce alces*), of the Wapiti (*Cervus canadensis*), of the Red Deer (*Cervus virginianus*), and of the Woodland Caribou (*Rangifer tarandus*).

The remainder of the report treats of the invertebrate portion of the collection, which is substantially as it stood before; the asterick again indicating that such specimens were collected during the expedition of the ss. *Neptune*, 1903-4.

Ascidians or Tunicates.

The museum contains a few specimens of ascidians of the following species:—*Boltenia bolteni* and *Halocynthia pyriformis* from Metis, P.Q., and *Felonia arenifera* from Richibucto, Straits of Northumberland. Two specimens of *Boltenia* sp.* one from Port Burwell, the other from Fullerton, were dredged during the expedition of the ss. *Neptune*, 1903-4.

Crustaceans.

The decapods embrace specimens of *Cancer amœus* from the Bay of Fundy and Bay Chaleur, of *Chionacetes opillia* from the Magdalen islands, of *Hyas araneus* from Paroquet, P.Q., and the Magdalen islands, of *Panopeus*, sp. and *Epiplatys productus* from Vancouver island, of *Eupagurus*, sp.* from Fullerton, of *Homarus americanus* from Nova Scotia, of *Orangon vulgaris* and *Hippolyte fabricii* from Metis, and of *Sabinea septemcarinata* and *Spirontocaris spinus* from Bradell Bank off Prince Edward Island. There is also a very large cray-fish (*Cambarus*) from near Kingston, Ont.

Chief among isopods are specimens of the salve bug (*Æga psora*) from Grand Manan, N.B., Churchill, and Port Burwell.* The last mentioned were found on cod-fish.

Specimens of barnacles of the genus *Balanus* are from Pictou, N.S., Bay Chaleur, Gulf of St. Lawrence, Port Burwell,* and Vancouver island. There are also a few specimens of barnacles of the species *Lepas fascicularis* from the Pacific coast.

Certain Arctic forms of crustaceans, collected during the expedition of the ss. *Neptune*, 1903-4, have been courteously identified by Prof. G. O. Sars, of Christiania, Norway, the expert carcinologist, viz.: *Spirontocaris gaimardii**, *Spirontocaris acu-*

* A few specimens of *Hyas*, perhaps *H. coarctatus** from Fullerton, were obtained during the expedition of the SS. 'Neptune.'

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*leata**, *Anonyx nugax**, *Pseudalibrotus littoralis**, *Ischyrocerus angvipes**, and the following fresh water forms: *Branchinecta paludosa**, *Diaptomus castor**, *Daphnia pulex**, and *Dactylopus stromia**, from Fullerton; *Nectocrangon lar**, and *Ampelisca eschrichti**, from Port Burwell; *Euthemisto libellula** from North Summerset; and *Gammarus locusta** from Wakeham bay, Ungava.

Mollusks.

Instances of Gastropod shells are specimens of *Tritonofusus kroyeri* from Metis, of *Sipho pygmaeus* from the Bay of Fundy, of *Sipho stimpsoni* and *Neptunea decemcostata* from Grand Manan, N.B., of *Buccinum tenue* from Metis and Port Burwell,* of *Buccinum undatum* from Metis, of *Nassa obsoleta* from Pointe du Chêne, N.B., and Nova Scotia, of *Purpura lapillus* from Metis and Magdalen islands, of *Cerostoma foliatum* from Queen Charlotte islands, of *Trophon clathratus* from Metis, of *Priene oregonensis* from British Columbia, of *Aporrhais occidentalis* from Ungava bay, of *Trichotropis borealis* from Metis and Port Burwell,* of *Turritella reticulata* from Gaspé, of *Turritella*, sp.* from Port Burwell, of *Lucuna vineta* from Bay of Fundy, of *Littorina littorea* from Grand Manan, N.B., Nova Scotia and Prince Edward Island, of *Littorina palliata*, from Nova Scotia and Hudson bay,* of *Littorina rudis* from Nova Scotia, of *Crepidula fornicata* from Pictou, N.S., of *Velutina undata* from Murray bay, of *Velutina levigata* from Gaspé and Port Burwell,* of *Natica clausa* from Metis, of *Lunatia heros* from Grand Manan, N.B., Pictou, N.S., and Bay Chaleur, of *Lunatia groenlandica* from Gaspé, of *Pachypoma gibberosum* from Vancouver island, of *Margarita cinerea* from Ungava bay, Cape Gaspé head, Metis, Fullerton,* and Port Burwell,* of *Solariella varicosa* from Metis, of *Haliotis kamtschatkana* from Queen Charlotte islands of *Puncturella*, sp.* from Port Burwell, of *Acmæa testudinalis* from Grand Manan, Tadousac, P.Q., and Fullerton,* of *Amicula vestita* from Rivière du Loup, P.Q., of *Tonicella marmorea* from Ungava bay and Fullerton*—the last mentioned being valves from the gizzards of eider ducks, and of *Katherina tunicata* from Vancouver island.

Instances of Lamellibranch shells are specimens of *Zirphæa crispata* from Vancouver island and Sable island, N.S., of *Cyrtodaria siliqua* from Gulf of St. Lawrence of *Saxicava rugosa* from Nova Scotia, Ungava bay and Byam island,* of *Mya truncata** from Cumberland Sound and Port Burwell, of *Mya arenaria* from Gulf of St. Lawrence, Bay Chaleur and Prince Edward island—the last mentioned being tiny juvenile specimens—of *Cochlodesma leanum* from Pictou, N.S., of *Lyonsia arenosa*, and *Kennerlia glacialis* from Gaspé, of *Macoma inflata* from Murray bay, of *Macoma calcarea* from Gaspé bay, Magdalen islands and Port Burwell,* of *Macoma balthica* from Tadousac, P.Q., and Fullerton,* of *Mesodesma deauratum* from Metis, P.Q., of *Spisula polynyma* from Gaspé, P.Q., of *Spisula solidissima* from Bay of Fundy and Pictou, N.S., of *Petricola photadiformis* from Prince Edward Island, of *Liocyma fluctuosa* from Bradelle bank, off Prince Edward island, of *Cytherea convexa* from Prince Edward Island and Magdalen islands, of *Venus mercenaria* from Nova Scotia, and straits of Northumberland, of *Astarte banksii* from Gulf of St. Lawrence, Hudson bay and Port Burwell,* of *Astarte compressa* from Metis and Magdalen islands, of *Astarte lactea* from Magdalen islands and Port Burwell,* of *Cyprina islandica* from Bay of Fundy, of *Serripes groenlandicus** from Port Burwell, of *Cardium ciliatum* from Bay Chaleur, Cape Gaspé Head and Port Burwell,* of *Megayoldia thraciformis* from Gulf of St. Lawrence, of *Yoldia sapotilla* from Pictou, N.S. of *Yoldia limatula* from Gulf of St. Lawrence and Port Burwell,* of *Leda minuta* from Gaspé and Port Burwell,* of *Nucula tenuis* from Labrador, of *Crenella pectinula* from Murray bay, of *Crenella*, sp.* from Fullerton and Port Burwell, of *Modiolaria nigra* and *Modiolaria discors* from Gaspé, of *Modiolaria corrugata* from Murray bay, Cape Gaspé Head, Fullerton,* and Port Burwell,* of *Modiola demissa* from Nova

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Scotia and Charlottetown, P.E.I., of *Modiola modiolus* from Nova Scotia, straits of Northumberland and off Douglastown Head, P.Q., of *Mytilus edulis* from Metis, Bay Chaleur, and Wakeham bay,* of *Mytilus californianus* from Vancouver island, of *Pecten groenlandicus* from Gulf of St. Lawrence, of *Pecten magellanicus* from Gaspé bay and Douglastown Bank, P.Q., of *Pecten islandicus* from Gulf of St. Lawrence, of *Pecten caurinus* from Straits of Georgia, B.C., of *Ostrea virginica* from Prince Edward Island, of *Ostrea lurida* from British Columbia, and of *Hinnites giganteus* from Vancouver island.

Among other specimens referable to mollusks are a few pteropods* from Port Burwell, Wakeham bay, and Black Tickle; an octopus from British Columbia, $5\frac{1}{2}$ feet long by $7\frac{1}{2}$ feet wide; specimens of *Ommatostrephes illecebrosa* from the Gulf of St. Lawrence; besides the following fresh water shells from the stomach of a sturgeon, viz.: *Planorbis bicarinatus*, *Planorbis parvus*, *Planorbis campanulatus*, *Limnæa cata-scopium*, *Valvata sincera*, *Valvata tricarinata*, *Amnicola porata*, *Sphærium striatinum?* and *Pisidium abditum*.

Polyzoans.

Of these are fragments of *Myrionozoum subgracile* from the Gulf of St. Lawrence and Bay Chaleur, of *Cellepora cervicornis*, *Cellepora incrassata* and *Eschara elegantula* from Orphan Bank, Gulf of St. Lawrence, and a specimen of *Flustra*, sp. from Rimouski, P.Q.

Brachiopods.

These embrace specimens of *Hemithyris psittacea* from Cape Gaspé Head, P.Q., and Ungava bay, of *Terebratalia spitzbergensis* from Murray bay, P.Q., and of *Terebratulina septentrionalis* from Bay of Fundy.

Annelids.

Specimens of the shells of *Spirorbis* from Port Burwell, Ungava,* are attached to pieces of alga, and to objects in the museum from various localities; and tubes of *Cistenides*,* and a few specimens of a very small fresh water leech* are from Fullerton. Certain other Annelids collected during the expedition of the ss. *Neptune*, 1903-4, await determination.

Echinoderms.

The echinoderms are mostly represented by specimens of *Echinarachnius parma* from Gulf of St. Lawrence, Bay Chaleur, Douglastown Head, P.Q., and the Magdalen islands, of *Strongylocentrotus drobachiensis* from Bay of Fundy, Cape Gaspé Head, P.Q., Rimouski, P.Q., the Magdalen islands, Ungava bay, and North Somerset,* of *Gorgonocephalus agassizii* from Province of Quebec, of *Ophiopholis aculeata* from near Churchill, Cape Gaspé Head, and Port Burwell,* of *Ophioglypha robusta* from Gulf of St. Lawrence and Port Burwell,* of *Ophioglypha sarsii* from Kamouraska, P.Q., and Port Burwell,* of *Leptasterias groenlandicus* from Metis, P.Q., of *Asterias poularis* from Cape Gaspé Head, P.Q., Rimouski, P.Q., and Port Burwell* (tiny specimens), of *Asterias vulgaris* from Digby, N.S., Douglastown Head, P.Q., Bay Chaleur and Magdalen islands, of *Crossaster papposus* from Hudson straits, Cape Gaspé Head, and North Somerset,* of *Psolus fabricii* from Rimouski, P.Q., and Port Burwell,* of *Psolus phantapus*¹ from Cape Gaspé Head, and of *Pentacta*, sp.* from Port Leopold, North Somerset.

¹ One small specimen, possibly a juvenile of *Psolus fabricii*, as the median podia are not at all distinct, but it resembles *Psolus phantapus* in form.

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Cœlenterates.

There are a few specimens of this sub-kingdom, such as *Alcyonium rubiforme* from the Gulf of St. Lawrence, *Pennatula aculeata* from near Anticosti island, and *Verrillia blakei* from Burrard's Inlet, B.C.; besides certain ctenophores* from Port Burwell, actinians* from North Summerset, and hydrozoans* from Fullerton and Black Tickle.

Sponges.

Of a few specimens of sponges in the museum may be mentioned *Chalina oculata* from the Gulf of St. Lawrence, and *Suberites compacta* from Sable Island, N.S.

Respectfully submitted.

ANDREW HALKETT,

Naturalist and Curator Canadian Fisheries Museum.

Department of Marine and Fisheries,
Ottawa, December, 1906.

APPENDIX No. 15

EXPENDITURE AND REVENUE

The total expenditure for all Fisheries services, except Civil Government, for the fiscal year ending 31st March, 1907, including Fishing Bounty, amounted to \$693,685. being within the appropriation by over \$100,000.

The total net fisheries revenue, during the same period, for rents, license fees, fines and sales, including the *modus vivendi* licenses to United States vessels, amounted to \$59,544.

Service.	Expenditure.	Vote.
	\$ cts.	\$ cts.
Fisheries.....	95,930 54	95,925 00
Fish-breeding.....	118,681 62	158,000 00
Fisheries protection service.....	204,837 82	216,745 00
Fishing bounty.....	159,015 75	160,000 00
Miscellaneous expenditure.....	115,219 92	167,568 68
Total.....	693,685 65	798,238 68

The details of the above will be found in the Auditor General's report under the proper headings.

In addition to the above, the following summary shows the salaries and disbursements of fishery officers in the several provinces, together with the expenses for maintenance of the different fish-breeding establishments throughout the Dominion.

Service.	\$ cts.
Fisheries, Ontario.....	3,188 34
" Quebec.....	5,590 94
" New Brunswick.....	24,987 70
" Nova Scotia.....	24,989 09
" Prince Edward Island.....	5,792 32
" Manitoba.....	2,173 33
" Northwest Territories.....	6,359 22
" British Columbia.....	20,381 97
" Yukon.....	1,030 35
General account.....	1,437 28
Total.....	95,930 54

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The expenditure by provinces is subdivided as follows :—

	Amount.	Total.
	\$ cts.	\$ cts.
<i>Ontario.</i>		
Salaries of officers	2,700 00	
Disbursements of officers	488 34	
Total		3,188 34
<i>Quebec.</i>		
Salaries of officers	3,095 70	
Disbursements of officers	2,411 34	
Miscellaneous	83 90	
Total		5,590 94
<i>New Brunswick.</i>		
Salaries of officers	17,630 95	
Disbursements of officers	6,336 75	
Miscellaneous	1,020 00	
Total		24,987 70
<i>Nova Scotia.</i>		
Salaries of officers	15,134 66	
Disbursements of officers	9,427 01	
Miscellaneous	427 42	
Total		24,989 09
<i>Prince Edward Island.</i>		
Salaries of officers	4,513 40	
Disbursements of officers	1,275 92	
Miscellaneous	3 00	
Total		5,792 32
<i>Manitoba.</i>		
Salaries of officers	1,501 00	
Disbursements of officers	459 60	
Miscellaneous	212 73	
Total		2,173 33
<i>Saskatchewan.</i>		
Salaries of officers	2,304 50	
Disbursements of officers	1,336 95	
Total		3,681 45
<i>Alberta.</i>		
Salaries of officers	1,470 15	
Disbursements	1,105 67	
Miscellaneous	101 95	
Total		2,677 77
<i>British Columbia.</i>		
Salaries of officers	14,276 90	
Disbursements of officers	3,082 44	
Miscellaneous	1,022 63	
Total		20,381 97
<i>Yukon.</i>		
Salaries of officers	750 00	
Disbursements	280 35	
General account		1,030 35
		1,437 28
Grand Total		95,930 54

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FISHERIES GENERAL EXPENDITURE—*Continued.*

FISH-BREEDING.

Service.	Expenditure.		Total.	
	\$	cts.	\$	cts.
Fish-breeding, Ottawa hatchery, Ont.	1,372	72		
" Newcastle " "	3,024	45		
" Sandwich " "	5,593	91		
" Quinté Bass Pond hatchery	532	80		
" Wiarton " "	1,981	15		
" Tadousac hatchery, Que ..	3,690	22		
" Gaspé " "	1,794	60		
" Magog " "	1,602	01		
" St. Alexis " "	777	10		
" Lac Tremblant "	1,274	15		
" Lake Lester	1,502	79		
" Chelsea	42	37		
" Restigouche " N. B.	3,493	18		
" Miramichi " "	2,644	56		
" St. John River hatchery "	1,473	20		
" Shemogue " "	1,518	05		
" Shippigan " "	654	98		
" Carleton " "	7,559	12		
" Bedford hatchery, N. S.	1,525	85		
" Margaree " "	2,307	43		
" Bay view " "	1,148	36		
" Canso " "	1,277	61		
" Windsor " "	1,607	39		
" Fourchu " "				
" Selkirk " Man.	3,438	51		
" Berens R " "	12,419	84		
" Fraser River hatchery, B.C.	4,646	22		
" Granite Creek " "	7,090	34		
" Skeena " "	5,826	25		
" Pemberton " "	7,727	08		
" Harrison Lake "	8,701	35		
" Rivers Inlet "	5,388	68		
" Kelley's Pond, P.E., Id.	1,711	35		
" Charlottetown	1,241	12		
General account	12,092	86		
			118,681	62

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FISHERIES GENERAL EXPENDITURE—*Continued.*FISH-BREEDING—*Continued.*

SALARIES, ETC.	\$	cts.	\$	cts.
General account			12,092	86
<i>Newcastle Hatchery.</i>				
Salaries.....	1,035	00		
Miscellaneous expenditure.....	1,989	45		
Total.....			3,024	45
<i>Sandwich Hatchery.</i>				
Salaries.....	787	50		
Miscellaneous expenditure.....	4,806	41		
Total.....			5,593	91
<i>Ottawa Hatchery.</i>				
Salaries	1,245	45		
Miscellaneous expenditure.....	127	27		
Total			1,372	72
<i>Quinté Bass Pond.</i>				
Salaries.....	31	25		
Miscellaneous expenditure.....	501	55		
Total.....			532	80
<i>Tadoussac Hatchery.</i>				
Salaries.....	625	00		
Miscellaneous expenditure.....	3,065	22		
Total.....			3,690	22
<i>Gaspé Hatchery.</i>				
Salaries.....	491	64		
Miscellaneous expenditure..	1,302	96		
Total.....			1,794	60
<i>Magog Hatchery.</i>				
Salaries.....	512	50		
Miscellaneous expenditure.....	1,089	51		
Total.....			1,602	01
<i>St. Alexis Hatchery.</i>				
Salaries	280	00		
Miscellaneous expenditure.....	497	10		
Total.....			777	10
<i>Restigouche Hatchery.</i>				
Salaries.....	825	00		
Miscellaneous expenditure.....	2,668	18		
Total..			3,493	18
<i>Miramichi Hatchery.</i>				
Salaries.....	750	00		
Miscellaneous expenditure.....	1,894	56		
Total			2,644	56
Carried forward.....			33,973	85

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FISHERIES GENERAL EXPENDITURE—*Continued.*FISH-BREEDING—*Continued.*

	\$ cts.	\$ cts.
Brought forward.....		33,973 85
<i>St. John River Hatchery.</i>		
Salaries.....	875 00	
Miscellaneous expenditure.....	598 20	
Total.....		1,473 20
<i>Shippigan Hatchery.</i>		
Miscellaneous expenditure.....		654 98
<i>Shemogue Hatchery.</i>		
Miscellaneous expenditure.....		1,518 05
<i>Bay View Hatchery.</i>		
Miscellaneous expenditure.....		1,148 36
<i>Bedford Hatchery.</i>		
Salaries.....	1,075 00	
Miscellaneous expenditure.....	450 85	
Total.....		1,525 85
<i>Margaree Hatchery.</i>		
Salaries.....	445 00	
Miscellaneous expenditure.....	1,862 43	
Total.....		2,307 43
<i>Selkirk Hatchery.</i>		
Salaries.....	900 00	
Miscellaneous expenditure.....	2,538 51	
Total.....		3,438 51
<i>Fraser River Hatchery.</i>		
Salaries.....	1,050 00	
Miscellaneous expenditure.....	3,596 22	
Total.....		4,646 22
<i>Pemberton Hatchery.</i>		
Salaries.....	1,944 33	
Miscellaneous expenditure.....	5,782 75	
Total.....		7,727 08
<i>Kelly's Pond.</i>		
Salaries.....	616 66	
Miscellaneous.....	1,094 69	
Total.....		1,711 35
<i>Skeena.</i>		
Salaries.....	775 00	
Miscellaneous.....	5,051 25	
Total.....		5,826 25
Carried forward.....		68,695 69

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FISHERIES GENERAL EXPENDITURE—Continued.

FISH-BREEDING—Concluded.

	\$ cts.	\$ cts.
Brought forward.....		68,595 69
<i>Rivers Inlet Hatchery.</i>		
Salaries.....	1,275 00	
Miscellaneous expenditure.....	4,113 68	
Total.....		5,388 68
<i>Lake Lester Hatchery.</i>		
Salaries.....	450 00	
Miscellaneous expenditure.....	1,052 79	
Total.....		1,502 79
<i>Granite Creek Hatchery.</i>		
Miscellaneous expenditure.....		7,090 34
<i>Lac Tremblant Hatchery.</i>		
Salaries ..	337 50	
Miscellaneous expenditure.....	936 65	
Total.....		1,274 15
<i>Charlottetown Hatchery.</i>		
Miscellaneous expenditure.....		1,241 12
<i>Canso Hatchery.</i>		
Miscellaneous expenditure.....		1,277 61
<i>Harrison Lake Hatchery.</i>		
Salaries ..	1,393 07	
Miscellaneous expenditure.....	7,308 30	
Total.....		8,701 37
<i>Windsor.</i>		
Salaries ..	525 00	
Miscellaneous expenditure.....	1,082 39	
Total.....		1,607 39
<i>Chelsea Pond.</i>		
Miscellaneous expenditure.....		42 37
<i>Fourchu Pond.</i>		
Miscellaneous expenditure.....		
<i>Bevens River Hatchery..</i>		
Miscellaneous expenditure.....		12,419 84
<i>Curleton Pond.</i>		
Miscellaneous expenditure.....		7,559 12
<i>Warton.</i>		
Salaries ..	401 61	
Miscellaneous ..	1,579 54	
Total.....		1,981 15
Grand total for F. B.....		118,681 62

FISHERIES GENERAL EXPENDITURE—*Continued.*

FISHERIES PROTECTION SERVICE—1906-1907.

	\$ cts.	\$ cts.
General Account		7,346 37
<i>Steamer 'Premier.'</i>		
Wages of officers and men.....	2,468 00	
Provisions	756 57	
Fuel	370 19	
Charter.....	3,000 00	
Miscellaneous expenditure	935 44	
	7,530 20	
Less proportionate cost, running steamer.....	1,860 00	
<i>Steamer 'Princess.'</i>		5,670 20
Wages of officers and men.....	7,957 67	
Provisions.....	2,231 63	
Fuel.....	4,240 23	
Repairs and supplies.....	3,960 05	
Miscellaneous expenditure.....	2,851 06	
Clothing.....	1,522 05	
Total		22,763 29
<i>Steamer 'Curlew.'</i>		
Wages of officers and men.....	5,871 32	
Provisions.....	1,491 08	
Fuel.....	1,503 95	
Repairs and supplies.....	4,991 90	
Miscellaneous expenditure	2,273 01	
Clothing	176 00	
Total.....		16,307 26
<i>Steamer 'Petrel.'</i>		
Wages of officers and men.....	5,935 83	
Provisions.....	2,460 34	
Fuel.....	982 42	
Repairs and supplies.....	3,961 96	
Miscellaneous expenditure.....	2,998 10	
Clothing	659 25	
Total		16,997 90
<i>Steamer 'Constance.'</i>		
Wages of officers and men.....	6,057 00	
Provisions.....	1,749 75	
Fuel.....	2,820 88	
Repairs and supplies.....	6,637 40	
Miscellaneous expenditure	1,525 87	
Clothing	21 23	
Total		18,812 13
<i>Schooner 'Osprey.'</i>		
Wages of officers and men.....	3,024 43	
Provisions.....	2,349 25	
Fuel	26 90	
Repairs and supplies.....	107 54	
Miscellaneous expenditure	1,783 08	
Clothing	484 80	
Total		6,776 00
Carried forward		94,673 15

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FISHERIES GENERAL EXPENDITURE—*Continued.*FISHERIES PROTECTION SERVICE—*Continued*

	\$ cts.	\$ cts.
Brought forward		94,673 15
<i>'Georgia.'</i>		
Wages of officers and men.....	3,051 93	
Provisions	736 95	
Fuel	637 93	
Repairs and supplies	870 84	
Miscellaneous	365 17	
Clothing	194 10	
Total		5,857 22
<i>'Swan.'</i>		
Wages of officers, &c	1,500 00	
Provisions	72 70	
Fuel	327 10	
Repairs and supplies	726 63	
Miscellaneous	86 11	
Clothing	33 00	
Total		2,745 54
<i>'Rocket,' (of Lake Winnipeg.)</i>		
Fuel	52 00	
Repairs and supplies	3 00	
Total		55 00
<i>'Kestrel.'</i>		
Wages, &c	9,490 32	
Provisions	5,637 61	
Fuel	2,139 00	
Repairs and supplies	3,048 97	
Miscellaneous	944 07	
Clothing	891 50	
Total		22,151 47
<i>'Falcon.'</i>		
Wages, &c	2,011 01	
Provisions	597 62	
Fuel	396 00	
Repairs and supplies	169 53	
Miscellaneous	217 45	
Clothing	82 50	
Total		3,474 11
<i>'Vigilant.'</i>		
Wages of officers and men.....	8,110 19	
Provisions	2,723 79	
Fuel	3,386 95	
Repairs and supplies	1,740 78	
Miscellaneous	16,737 14	
Total		32,698 85
Carried forward		161,655 34

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FISHERIES GENERAL EXPENDITURE—*Concluded.*FISHERIES PROTECTION SERVICE—*Concluded.*

	\$	cts.	\$	cts.
Brought forward.....			161,655	34
'Canada.'				
Wages.....	16,014	10		
Provisions.....	11,604	91		
Fuel.....	2,769	49		
Repairs and supplies.....	21,900	51		
Clothing.....	1,441	10		
Miscellaneous.....	4,948	70		
Charter.....	255	10		
Fisheries Intelligence Bureau.....			58,933	91
			2,961	45
Grand total.....			223,550	70
Less amount paid by Customs Department for St'r. 'Constance'.....			18,812	13
			204,738	57
Plans specifications, &c., of steamer for Lake Winnipeg.....			99	25
Total.....			204,837	82
	\$	cts.	\$	cts.
MISCELLANEOUS.				
Building fishways.....	2,199	09		
Legal and incidental expenses.....	704	71		
Canadian fisheries exhibit.....	3,169	84		
Expenditure in connection with the distribution of fishing bounties.....	4,988	50		
Surveys of oyster beds.....	2,690	10		
Issuing licenses to United States fishing vessels.....	633	68		
Cold storage.....	47,350	93		
Georgian Bay biological laboratory.....	1,059	80		
Fishery Commission.....	4,441	38		
Disposal of Dogfish.....	45,384	94		
Fish drier, Souris, P.E.I.....	1,286	95		
Gratuity widow of late Wm. Carson.....	120	00		
Claims of Provincial Governments.....	1,190	00		
Total.....			115,219	92

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STATEMENT of Fisheries Revenue paid to the Credit of the Receiver General of Canada
for the fiscal year ended on 31st March, 1907.

Licenses Fines, Sales, &c.	\$ cts.
Ontario	349 10
Quebec	8,145 97
Nova Scotia	3,118 73
New Brunswick	9,153 08
Prince Edward Island	1,300 94
Manitoba	2,285 98
Northwest Territories	358 00
British Columbia	29,903 95
Yukon	173 00
Franklin District	100 00
Hudson Bay	10 00
Alberta	2 50
Saskatchewan	509 00
Licenses to United States fishing vessels	55,410 25
Total	4,134 00
Total	59,544 25

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COMPARATIVE STATEMENT of Expenditure and Revenue of the

No.		1890-91.		1891-92.		1892-93.	
		Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	General Account Fisheries.....						
2	Ontario.....	15,540 30	26,517 70	15,155 83	25,368 90	20,116 91	30,623 09
3	Quebec.....	10,666 98	3,642 14	10,917 36	4,742 76	11,761 34	7,471 70
4	New Brunswick.....	16,082 77	7,193 69	15,707 98	6,334 83	15,721 05	7,831 53
5	Nova Scotia.....	17,844 19	5,582 65	18,755 86	3,357 42	19,444 22	6,782 02
6	Prince Edward Island.....	3,242 25	667 00	1,835 65	166 00	2,847 60	304 10
7	Manitoba and N.W. Terrs....	3,609 03	1,234 00	3,593 43	1,079 00	3,932 96	1,661 68
8	British Columbia.....	4,220 53	12,859 02	6,158 17	8,192 48	5,490 60	40,264 00
9	Fish-breeding and fishways....	39,496 45	1,286 50	43,957 74	178 00	47,322 49	.....
10	Fisheries Protection Service....	83,050 16	1,934 49	93,397 40	.....	106,805 39	.....
11	Miscellaneous.....	13,382 28	.....	17,449 06	.....	100,602 14	.....
	Totals.....	207,234 94	60,917 19	226,928 48	49,719 39	334,044 70	94,938 12
	Fishing bounties.....	16,967 22	.....	156,892 25	.....	159,752 15	.....
		1897-98.		1898-99.		1899-00.	
		Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
12	General Account Fisheries.....	2,389 66	.....	2,632 12	.....	652 41	.....
13	Ontario.....	19,239 34	30,574 57	11,784 22	5,830 85	3,804 94	794 12
14	Quebec.....	11,140 16	7,571 15	11,350 27	6,287 71	5,452 41	2,543 04
15	New Brunswick.....	17,063 58	5,317 08	22,922 50	10,430 08	21,659 94	12,015 27
16	Nova Scotia.....	21,683 91	11,511 85	25,348 11	6,668 22	27,461 91	5,494 49
17	Prince Edward Island.....	6,775 78	2,707 57	6,832 85	2,242 24	7,364 30	2,207 12
18	Manitoba.....	1,266 26	1,515 00	1,883 37	1,537 85	1,723 59	2,028 00
19	N. W. Territories.....	2,324 66	393 87	4,065 68	150 50	3,848 25	1,522 50
20	British Columbia.....	8,568 79	47,864 75	8,459 47	45,801 75	13,662 17	53,195 35
21	Yukon.....	.....	.....	.....	.....	.....	.....
22	Hudson Bay Territory.....	.....	.....	.....	.....	.....	.....
23	Fish-breeding.....	28,002 32	.....	34,522 57	.....	38,070 12	.....
24	Fisheries Protection Service....	101,807 96	.....	105,133 27	.....	97,370 11	.....
25	Miscellaneous.....	59,919 56	.....	23,207 73	.....	31,125 67	.....
	Totals.....	280,061 98	107,455 84	427,599 16	75,949 20	411,717 35	79,799 89
	Fishing bounties.....	157,504 00	.....	159,459 00	.....	160,000 06	.....
		1904-05.		1905-06.		1906-07.	
		Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
26	General Account Fisheries.....	1,314 75	.....	2,261 66	.....	1,437 28	.....
27	Ontario.....	4,294 60	1,471 51	4,949 67	499 15	3,188 34	349 10
28	Quebec.....	6,769 16	4,648 86	8,123 04	7,564 39	5,590 94	8,145 97
29	New Brunswick.....	25,253 16	11,887 19	35,856 38	11,395 84	24,987 70	9,153 08
30	Nova Scotia.....	32,619 85	6,448 88	49,351 10	4,934 43	24,949 09	.....
31	Prince Edward Island.....	6,879 05	2,046 50	9,351 81	2,206 25	5,792 32	3,118 73
32	Manitoba.....	2,800 64	4,875 70	3,687 07	4,148 00	2,173 33	1,300 94
33	N. W. Territories.....	7,003 55	1,151 50	11,124 22	868 97	6,359 22	969 50
34	British Columbia.....	16,631 37	47,436 00	30,141 33	51,532 50	20,381 97	29,903 95
35	Yukon.....	1,400 00	340 00	1,083 31	282 00	1,030 35	173 00
36	Hudson Bay Territory.....	.....	10 00	.....	10 00	.....	10 00
37	Fish-breeding.....	149,419 24	.....	209,279 78	.....	118,681 62	.....
38	Fisheries Protection Service....	462,082 12	.....	249,876 37	.....	204,837 82	.....
39	Miscellaneous.....	105,892 97	10,472 00	194,993 61	14,568 16	115,219 92	4,134 00
	Totals.....	822,360 46	90,988 14	968,626 00	98,009 69	534,669 90	59,544 25
	Fishing bounties.....	157,228 24	158,546 65	159,015 75

NOTE—Miscellaneous Revenue consists of U.S. *Modus vivendi* License.

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Fisheries Department from July 1, 1890, to March 31, 1907.

1893-94.		1894-95.		1895-96.		1896-97.		Number.
Expenditure.	Revenue.	Expenditure.	Revenue.	Expenditure.	Revenue.	Expenditure.	Revenue.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
						2,198 47		1
22,634 37	28,632 82	21,938 56	33,211 60	24,917 48	35,681 68	21,592 40	32,814 66	2
11,692 82	7,211 82	12,459 34	8,836 18	11,876 43	8,160 98	12,910 80	7,876 12	3
18,522 94	8,333 24	21,370 94	11,170 36	20,526 56	10,696 88	21,671 92	10,110 77	4
20,420 81	5,296 27	23,555 38	7,075 07	23,049 41	6,180 93	23,682 33	5,239 55	5
3,078 55	980 15	3,796 58	3,312 30	3,555 87	2,161 85	3,744 36	2,032 25	6
5,331 29	926 99	6,178 71	2,458 80	6,915 20	2,256 69	1,908 14	1,719 00	7
5,283 21	25,337 90	6,218 74	23,517 25	6,226 77	26,410 75	8,841 64	39,888 82	8
45,024 67		39,730 93		38,050 41		27,330 73		9
115,147 59		100,207 29		102,021 72		99,357 01		10
34,892 19		24,619 86		20,203 25		62,777 30		11
282,028 44	76,719 19	260,076 33	89,581 56	257,237 10	91,549 76	289,197 01	100,025 30	
158,794 54		160,089 42		163,567 99		154,389 77		
1900-01.		1901-02.		1902-03.		1903-04.		
1,117 49		765 78		402 97		1,362 11		12
3,819 57	717 35	4,445 93	373 42	4,650 53	1,818 83	4,500 43	2,578 48	13
7,934 03	4,738 92	6,242 53	2,498 85	6,785 86	4,379 15	7,619 67	4,670 64	14
28,452 51	10,150 40	23,813 62	11,658 34	27,132 84	11,188 02	27,664 34	10,593 20	15
35,760 39	6,595 94	32,618 00	6,084 65	39,118 79	3,962 45	30,003 01	3,685 75	16
7,934 03	1,525 30	7,814 02	1,843 45	7,081 60	2,007 35	7,320 96	1,983 42	17
2,669 74	1,103 00	2,624 87	2,279 00	3,129 70	1,784 00	2,789 74	4,002 70	18
6,251 39	1,222 55	5,928 22	950 07	7,076 26	1,350 50	7,317 49	922 50	19
17,886 36	52,960 35	18,560 73	41,178 65	17,808 45	43,015 02	15,133 65	56,904 34	20
		2,066 66	1,130 00	1,522 00	320 00	1,400 00	240 00	21
							10 00	22
68,961 40		79,891 85		77,330 86		109,286 07		23
124,211 21		152,723 69		145,137 49		204,654 66		24
27,833 79	9,178 50	56,131 26	11,223 65	30,903 27	8,925 40	56,828 18	10,165 50	25
332,767 07	88,145 11	393,627 21	79,169 58	368,091 12	78,635 82	475,880 31	95,756 53	
158,802 50		155,942 00		159,853 50		158,943 70		

APPENDIX No. 16.

THE OUTSIDE STAFF OF THE FISHERIES BRANCH.

The following are Inspectors of Fisheries in the different provinces of the Dominion, 1907

Name.	P.O. Address.	Extent of Jurisdiction.
Bertram, A. C.	North Sydney, N.S.	District No. 1.—Cape Breton Island.
Hockin, Robt.	Pictou, N.S.	District No. 2.—Cumberland, Colchester, Pictou, Antigonish, Guysboro', Halifax and Hants counties.
Robertson, Andrew C. . .	Barrington Passage..	District No. 3.—Lunenburg, Queens, Shelburne, Yarmouth, Digby, Annapolis and Kings counties.
Calder, John	Campobello, N.B. . .	District No. 1.—The counties of Charlotte and St. John.
Chapman, Robt. A.	Moncton, N.B.	District No. 2.—Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert counties.
Harrison, H. E.	Fredericton, N.B. . .	District No. 3.—Kings, Queens, Sunbury, York, Carleton and Victoria counties.
Matheson, J. A.	Charlottetown.....	Prince Edward Island.
Wakeham, Wm., M.D. . .	Gaspé Basin, Que. . .	Lower St. Lawrence River and Gulf.
Belliveau, A. H.	Ottawa.	Dominion of Canada.
Riendeau, Jos.	Montreal.....	The counties of the province of Quebec bordering on the St. Lawrence from Huntington to Three Rivers.
Hurley, J. M.	Belleville, Ont.	That portion of Ontario east of the western boundary line of the counties of Durham, Victoria and Haliburton, including Lake Scugog and the eastern boundary of Muskoka and Parry Sound districts.
Sheppard, O. B.	Toronto, Ont.	That part of the province of Ontario west of the eastern boundaries of the county of Ontario, and the districts of Muskoka and Parry Sound along the Mattawa and Ottawa rivers, and northward along the north-eastern boundary line of said province to James' Bay.
Duncan, A. G.	Marksville, Ont. . .	That portion of Ontario lying west and north of Lake Nipissing, the rivers Mattawa and Ottawa and the north-east boundary line of the province to James bay, embracing Nipissing, Algoma, Thunder bay and Rainy river districts, Lake Superior and such portions of Lake Huron and Georgian bay as lie adjacent or opposite to the part of Ontario above described.
Young, Wm. S.	Selkirk, Man.	Province of Manitoba and the district of Keewatin.
Miller, E. W.	Qu'Appelle, N.W.T.	" Saskatchewan.
Young, Harrison S.	Edmonton.	" Alberta and district of McKenzie.
McKay, Horace T.	Dawson City	Yukon district.
Sword, C. B.	N. Westminster, B.C.	Province of British Columbia.—No. 1. Southern district.
Williams, J. T.	Port Essington.....	" " No. 2. Northern district.
Taylor, E. G.	Nanaimo.....	" " No. 3. Vancouver Id.

OTHER DEPARTMENTAL OFFICERS.

Halket, Andrew.....	Fish. Museum, Ott.	Naturalist and Curator of Fisheries Museum, at Ottawa.
MacFarlane, Peter.	New Glasgow, N.S. . .	Officer in charge Bait cold storage.
Migneault, R. M. S.	Yamaska	Inspector of fishways.
Mackerrow, A. D.	Halifax.	In charge Intelligence Bureau.

SESSIONAL PAPER No. 22

LIST OF FISHERY OVERSEERS IN THE DOMINION OF CANADA.

REVISED TO DECEMBER, 1907.

NOVA SCOTIA.

Annapolis County.

Name of Overseer.	P.O. Address.	Extent of Jurisdiction.
Fritz, Henry.....	Port George.....	Annapolis county.

Antigonish County.

McAdam, Alexander....	Malignant cove.. ...	Antigonish county.
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Cape Breton County.

Forbes, A. R.....	North Sydney	Cape Breton county.
Lavatte, Henry.....	Louisbourg.....	" "
McCuish, John.....	Scatarie.....	" "
McDonald, Joseph.....	Little Loraine	" "
McInnis, Michael R.	Amaguadus pond. ...	" "
McLean, John.....	Gabarouse lake.	" "
McLean, Murdock.....	Leitches creek	" "
McLeod, Angus.....	Port Morien.....	" "
Sullivan, Timothy	Little Bras d'Or.....	" "

Colchester County.

Davidson, J. W.....	Bass river.....	Colchester county.
Henderson, G. W.....	Tatamagouche.....	"
McGregor, E. H.....	Lower Stewiacke....	"

Cumberland County.

Angevine, Frank	Middleboro.	Cumberland county.
Brownell, Ferguson.	Northport.	"
Reid, John D.....	Pugwash.	"
Thompson, Guy.....	Oxford	"

Digby County.

Bishop, H. R.	Digby	Municipality of Digby, Digby county.
German, Thos.....	Meteghan.....	Municipality of Claire, Digby county.

Guysboro County.

Davis, John	Guysboro.....	Guysboro county.
Reid, David	Port Hilford.....	"

Halifax County.

Gaston, Robt.	Pope's harbour	Sea coast and inland waters at Halifax county.
Kennedy, Wm.....	Hubbard's cove.	Halifax county.
Rowlings, George.	Musquodoboit hrbr..	Sea coast and inland waters of Halifax county.

7-8 EDWARD VII., A. 1908

LIST of Fishery Overseers in the Dominion of Canada, &c.—*Continued.*NOVA SCOTIA—*Continued.**Hants County.*

Name of Overseer.	P. O. Address.	Extent of Jurisdiction.
McDonald, Chas.	Shubenacadie.	County of Hants.

Inverness County.

Aucoin, Wm.	Eastern harbour. . . .	No. 6.—From Big Pond Lobster Factory north, including Cheticamp, Eastern harbour, Little river, Pleasant bay and Paulet Cove.
Chisholm, Arch. A.	S. W. Margaree.	Inverness coast from Broad cove Chapel to Delany's cove, also East Lake Ainslie and streams, Loch Ban, S. W. Margaree river and tributaries and Margaree river from forks of Margaree Hr.
Gillies, Peter.	S. W. Port Hood.	No. 3.—Inverness Co. For bounty only.
Hart, Albert.	N. E. Margaree.	Coast of Inverness Co., from Delany's cove northward including Big pond, Eastern Hr., &c., also N. E. Margaree Riv. from Margaree forks to Source, and all other streams to Victoria Co. line.
McIntosh, Geo. P.	Pleasant bay.	Coast of Inverness Co., extending from Pleasant bay to Meat cove (inclusive).
McLellan, Jno. B.	Kingsville.	No. 2.—Inverness Co. For bounty only.
McLean, D. F.	Port Hood.	No. 1.—W. division coast south of Mabou Hr., including S. W. Mabou river, Port Hood, Judique Long Pt., Pt. Hastings and Hawkesbury, to N. W. arm River Inhabitants in interior, and north side Victoria Co., from Js. McKinnons to Whycocomag bay, and through Glencoe and S. W. ridge of Mabou, to Mabou bridge.

Kings County.

Bishop, Adolphus.	Grand Pré.	Kings county.
Eaton, E. B.	Canning.	"
McIntyre, W.	Aylesford.	"
Reid, Reuben F.	Wolfville.	"

Lunenburg County.

Morris, Jno. B.	Bridgewater.	Lunenburg county.
Webber, John A.	Chester.	"

Pictou County.

Kitchin, James.	River John.	Western division Pictou Co., comprising coast, water from Colchester Co., line to Cole's reef, Pictou Hr. and streams flowing into viz., River John and tributaries, Toney river, and Big and Little Cariboo rivers.
McDonald, Alexdr. J.	Bailey's brook.	Pictou County.
Pritchard, A. O.	New Glasgow.	Pictou harbour, Pictou island, East, West and Middle rivers, Pictou Co.

SESSIONAL PAPER No. 22

LIST of Fishery Overseers in the Dominion of Canada, &c.—*Continued.*NOVA SCOTIA—*Concluded.**Queens County.*

Name of Overseer.	P. O. Address.	Extent of Jurisdiction.
Bain, J. L.	Liverpool	Queens county.
Young, Chas.	Mill village.	"

Richmond County.

Brymer, Arthur.	Lower L'Ardoise.	No. 3.—Eastern division that portion of sea coast, lakes and inland waters lying east of St. Peter canal.
Boyle, Dugald R.	West Arichat.	Coast and inland waters of Isle Madame including southerly half of waters of Lennox passage.
Morrisson, Archd. ...	River Bourgeois.	Richmond county.

Shelburne County.

Goudey, E. S.	Barrington passage.	From and including Clydes river to Yarmouth Co. line.
Hines, George K.	Shelburne	Shelburne county.

Victoria County.

Campbell, Jno M., Marine Agent at.	Halifax.	St. Paul's island.
Gillis, Duncan.	Baddeck.	Victoria county.
Moffatt, W. P.	Cape North.	Cape North, Bay St. Lawrence to county line at Meat cove.
Montgomery, D. P.	Neils harbour.	Neils harbour including Green cove and New Heaven.
Morrison, Alexdr.	Wreck cove.	Englishtown north to Smoky cape at south Ingonish.
McDonald, Murdo	Big Bras d'Or.	District Big Bras d'Or north to Englishtown.
McLean, Angus	Ingonish.	North and south Ingonish, including Ingonish island.
McRea, Charles.	Brook Middle river.	Victoria county.

Yarmouth County.

Hartfield, A. M.	Arcadia.	Yarmouth county.
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NEW BRUNSWICK.

Albert County.

Dowling, C. S.	Alma.	County of Albert.
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Charlotte County.

Billings, Robert.	St. Andrews.	Waters in vicinity of St. Andrews, extending from Owen head to Oak bay.
Fraser, W. A.	Woodward's cove, Grand Manan.	Island of Grand Manan, and waters surrounding the same.
Savage, Charles.	Campobello.	District of Campobello, and the west Isles, Charlotte Co.
Todd, Frank.	St. Stephen.	County of Charlotte.

7-8 EDWARD VII., A. 1908

LIST of Fishery Overseers in the Dominion of Canada, &c.—*Continued.*NEW BRUNSWICK—*Continued.**Gloucester County.*

Name.	Address.	Extent of Jurisdiction.
Canty, Thomas	Bathurst	Gloucester* county.
Doucet, Jérôme E.	Elm Tree	"
Robichaud, Wm. C.	Inkerman	"

Kent County.

Hannah, Wm. F.	Richibucto.	County of Kent.
LeBlanc, O. J. O.	Buctouche.	Coast line and inland waters at the parishes of Wellington and St. Mary.

Northumberland County.

Abbott, Lemuel.	Chatham.	Both shores of Miramichi river from Point Au Quart on south to Oak point on north to junction with N. W. S. W. Miramichi rivers, with all islands therein and streams emptying into.
Smith, B. W.	Hardwicke	County of Northumberland.

Queen's County.

Belyea, J. P.	Gagetown.	County of Queen's.
Hetherington, I. T.	Johnston.	"

Restigouche County.

McLean, Donald.	Charlo.	Baie des Chaleurs, and tributaries from Belledune to Dalhousie.
Miller, George.	Dalhousie	Restigouche river and its tributaries in the counties of Restigouche and Victoria.

Sunbury County.

McLean, Cecil F.	Burton.	St. John river from Indiantown, Sunbury county, to the county line of York.
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St. John County.

Belyea, J. F.	58 Middle street, St. John.	County of St. John.
Cochrane, Jno	I. C. R. stat., St. John	City of St. John and vicinity.

Victoria County.

LeClair, Joseph.	Grand Falls	County of Victoria.
Gagnon, L. A.	Edmundston	Madawaska district.

SESSIONAL PAPER No. 22

LIST of Fishery Overseers in the Dominion of Canada, &c.—*Continued.*NEW BRUNSWICK—*Concluded.**Westmorland County.*

Name.	Address.	Extent of Jurisdiction.
Arsenault, Thos. V.....	Barachois.....	Coastal and inland waters of parish of Shediac and portion of Botsford parish, north of Big Shemogue Hr., and road from same to near Bristol corner, past Bristol corner and Lowthers to parish at Sackville with jurisdiction in parishes of Moncton and Salisbury.
Melanson, Ambroise....	Pré-d'en-haut.....	Parish of Dorchester including Petitcodiac river.
Copp, George E.....	Baie Verte.....	Part of Botsford parish, county of Westmorland.
Prescott, Joseph.....	Baie Verte.....	Parishes of Westmorland and Sackville.

York County.

McKay, James D.....	Fredericton.....	County of York.
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PRINCE EDWARD ISLAND.

Kings County.

McCormac, J. A.....	Souris.....	County of Kings.
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Prince County.

Davison, John.....	Bedeque.....	County of Prince.
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Queens County.

Hobkirk, W. C.....	Charlottetown....	Province of Prince Edward Island.
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PROVINCE OF QUEBEC.

Gaspé County.

Veit, Fred.....	Gaspé Basin.....	That portion of the province south of the St. Lawrence to and including county of Bellechasse, but specially the counties of Bonaventure and Gaspé.
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Magdalen Island.

Arsenault, Azade.....	Grindstone island...	Magdalen islands.
Chevrier, J. A.....	Amherst, Magdalen island.	That part of Magdalen islands comprising Entry, Amherst and Grindstone islands, also Harbour Basque lagoons.
Theriault, Bruno.....	House harbour Magdalen island.	That part of the islands including House harbour, Grosse isle, Grand entry and bays and Bryon island.

7-8 EDWARD VII., A. 1908

LIST of Fishery Overseers in the Dominion of Canada, &c.—*Continued.*PROVINCE OF QUEBEC—*Concluded.**Saguenay County—North Shore.*

Name of Overseer.	P.O. Address.	Extent of Jurisdiction.
Cabot, Geo. E.....	Fox bay, Anticosti island.	The Island of Anticosti and adjacent waters.
Blais, Alex.....	(Winter address) Berthier en bas. (Summer address) Long Pt. Bradore, <i>via</i> Newfoundland.	North shore, from Blancs Sablons to Chicatica, (Bonne Esperance district).
Le Couvie, John..	(Winter address) Lobster cove, Gaspé. (Summer address) Cr. Commander of <i>Princess</i> .	North shore, from Chicatica to Cape Whittle (St. Augustin District).
Cormier, Achille.....	(Winter address) Esquimaux point. (Summer) Romaine <i>via</i> Natashquan.	North shore, from Cape Whittle to Natashquan point (Romaine district).
Joncas, Richard	Natashquan	North shore, including Natashquan to Ste. Geneviève (Natashquan District).
LeBlanc, Eusebe..	Esquimaux point.	North shore, including Ste. Geneviève to Pigou (Mingan district).
Migneault, Theotime...	(Winter address) 140 Rue St. François Quebec. (Summer) Moisie.	North shore, including Pigou to Jambons (Moisie district).
Comeau, Nap. A.....	Godbout.....	North shore, including Jambons to Tadoussac (Godbout District).

The following six names are merely Bounty Officers, exercising no other jurisdiction *re* fishery matters.

Forest, George.....	Bonaventure river..	Bonaventure county, from Maguasha to and including Paspebiac.
Chapados, F. X.....	Gascons.....	Bonaventure Co., from Paspebiac to Gaspé Co.
Keays, John.....	Little Pabos	Gaspé county, from county line eastward to but not including Barachois, Malbay.
Carter, A. T	Gaspé basin.....	Gaspé county, from Barachois, Malbay, to Fame point, both included.
Letourneau, Louis	Mont Louis.....	Gaspé county, from Fame point to and including Claude river.
Verreault, Louis.....	Petits Mechins....	Rimouski county.

MANITOBA.

McPherson, A. J.	Dauphin, Man	Lake Winnipegosis and Manitoba.
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SASKATCHEWAN.

McKay, Henry.....	Cedar lake.....	Waters between district of Prince Albert on West and Grand rapids on Great Saskatchewan river, Sask.
McGregor, Chas. F. ..	Prince Albert.....	District of Prince Albert, Saskatchewan.
Silverthorn, J. W.....	Lumsden.....	District of Long lake, Qu'Appelle river, bounded on south by base line tp. No. 16, on north by tp. No. 30, on east by east side to range 19, and on west by west side of range 27, all west of 2nd Meridian.

SESSIONAL PAPER No. 22

LIST of Fishery Overseers in the Dominion of Canada, &c.—*Continued.*

ALBERTA.

Name of Overseer.	P. O. Address.	Extent of Jurisdiction.
Wood, Ingraham.....	Pigeon lake	Pigeon lake and vicinity.

BRITISH COLUMBIA.

Galbraith, W. M.....	14 Ridge road, Victoria.	British Columbia.
Harrison, Chas.....	Masset	Queen Charlotte islands.
McPhadden, D.....	Vancouver.....	British Columbia.
Wise, James	New Westminster...	Fraser river, north arm.

7-8 EDWARD VII., A. 1908

LIST OF OFFICERS IN CHARGE OF GOVERNMENT FISH HATCHERIES,
1907.

Name.	P. O. Address.	Province.	Rank.
Cunningham, F. H.	Ottawa	Ontario	Superintendent Fish Culture.
Finlayson, Alexander	"	"	Inspector
Walker, John	"	"	Officer in charge Government Hatchery..
Armstrong, Wm.	Newcastle	"	"
Parker, Wm.	Sandwich	"	"
McNab, A. J.	Warton, Ont.	"	"
McCargar, J. K.	Belleville	"	"
Deseve, A. L.	Magog	Quebec	"
Catellier, L. N.	Tadoussac	"	"
Lindsay, Robert	Gaspé basin.	"	"
Elliott, Joseph	St. Alexis des Mts.	"	"
Robert, Alphonse	Mont Tremblant	"	"
Belknap, W. G.	Baldwin mills.	"	"
Mowatt, Alexander	Campbellton	New Brunswick	"
McCluskey, Charles	Grand falls	"	"
Sheasgreen, Isaac	South Esk	"	"
Savoy, Sebastien	Shippigan	"	"
LeBlanc, N. S.	Cape Bald	"	"
Ogden, A.	Bedford basin.	Nova Scotia	"
Harris, W. F.	Pictou	"	"
Meagher, James	Canso	"	"
Carmichael, A. G.	N. E. Margaree	"	"
Burgess, Frank	Windsor	"	"
Holroyd, A. W.	Windsor station.	P. E. Island	"
Hooker, F. W.	Selkirk	Manitoba	"
Whitwell, Thomas	Skeena river	British Columbia	"
Mitchell, D. S.	Granite Creek	"	"
Robertson, Alexander	Lillooet	"	"
Robinson, Thos.	Harrison springs	"	"
Roxburg, Wm.	New Westminster	"	"
Bucknall, R. C.	Eivers inlet	"	"
Pretty, A. W.	Hazelton	"	"
Gibbs, H.	"	"	"
Kemp, Ernest	Charlottetown	"	Dominion Oyster Expert.

LIST OF CANADIAN GOVERNMENT CRUISERS AND NUMBER OF
CREWS, 1907.

O. G. V. Spain, Commander of Marine Service, Ottawa.

Name of Vessel.	Commanders.	Winter Address.	Number of Crew.
Canada	C. T. Knowlton, Capt.	Parrsboro, N.S.	53
Constance	George M. May, Capt.	Quebec, P.Q.	22
Curlew	Capt. Robinson, acting	St. John, N.B.	17
Falcon	E. B. Williams	Vancouver, B.C.	5
Kestrel	H. Newcomb, Capt.	Vancouver, B.C.	22
Princess	W. Wakehan, Comdr.	Gaspé basin, P.Q.	27
Osprey	J. Graham, Capt.	Cambridge road, P.E.I.	19
Petrel	W. H. Kent, Capt.	Liverpool, N. S.	25
Vigilant	E. Dunn, Capt.	Walkerville, Ont.	31
Total of Officers and Crews			221

Canada -

